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TOXIC EFFECTS OF CARBOLIC ACID.

BY E. DECROIX, PRINCIPAL VETERINARY SURGEON, FRENCH ARMY.

[Our distinguished colleague of the French army sends us the following interesting communication—the first, we believe, which has been forwarded for publication in an English veterinary journal by a Continental veterinarian—and at the same time congratulates Mr. Simcocks upon his courage in describing his misadventure with carbolic acid.]

IN reading in the *Veterinary Journal*, for October, the account of an accident arising from the external employment of carbolic acid by Mr. Simcocks, it occurred to me that I had observed an analogous accident under the following circumstances. At the commencement of 1872, I had occasion to treat in my regiment many horses suffering from parasitic affections—particularly *pediculi*; and after trying various measures, I had recourse to lotions of liquid carbolic acid, in the proportion of 10 grammes to the litre of water. Not obtaining satisfactory results, the quantity of acid was doubled—20 grammes to the litre; but as even this did not appear to be sufficiently potent, the proportion of acid was raised to 50 grammes.

Nevertheless, I was astonished to find that many parasites

resisted this powerful lotion, so I tried 100 grammes to the litre —being 400 grammes to 4 litres of tepid water. This proportion did not dissolve in the water, however, but on being shaken it was suspended in it, and formed a kind of milky emulsion.

The dressing of one of the horses was commenced with this at 11.30 a.m. Towards 11.45 I noticed that the hand of the soldier who applied the lotion had its epidermis blanched, swollen, and wrinkled, like that of a washerwoman who has been engaged at the tub all day. Some minutes later I inquired of this man if he perceived any disagreeable sensation in his hand, and he said he felt a little prickling (*picottement*). I made him wash his hands with soft soap, then in alkalised water; and a sponge being attached to the end of a staff, the dressing of the horse was continued. Toward 12.30, when all the body of the latter had been well rubbed—with the hair and against the hair —except the limbs and the posterior part of the abdomen, which were left untouched, the dressing ceased, and the animal was allowed to be exposed to the sun. In about an hour a general trembling was manifest,—when the animal was well wisped. Notwithstanding this, however, the tremblings increased rapidly and the horse began to exhibit great anxiety. Seeing that it was about to fall, it was ordered to be taken into the nearest stable, about five or six yards' distant; but while it was being untied, it sprang backwards, its head-collar came off, it staggered for some steps, and was at last got into the stable.

There the anxiety and the general tremblings were greatly increased; all the body was shaking; the pawing was continual; the eyes were half-closed, and the lips agitated with a febrile movement like those of a horse in a fit of Rabies. The eyes blinked as they do when an animal comes suddenly out of darkness into a bright light; the agitation was so great that it was not possible to examine the pulse; and the creature was frightened when any one made sudden movements near it, and feared being approached. The respiration was hurried, anxious, shallow, and jerking; soon there appeared slight, flattened, and hard œdematous patches on the inner surface of the thighs, axillæ, and at the right flank; while the skin was thickened and had lost something of its suppleness.

By these alarming symptoms it was easy to recognise the existence of *cutaneous asphyxia*, due to the too energetic action of the carbolic acid lotion.

Vigorous wispings were again resorted to, then washing with water rendered slightly alkaline by liquid ammonia. A mash was partly eaten.

At 2.30 the animal lost its equilibrium, and fell on its right side, on the thick bed of litter which had been prepared for it. The agitation and trembling persisted, although they were less intense; the respirations were 54 per minute; the wings of the nostrils dilated so imperfectly, that an assistant had to keep them widely open; the limbs executed alternate automatic, but regular movements, as in walking or trotting; the mucous membranes were slightly injected; and there was a kind of comatose delirium. Blood was abstracted to the amount of from three to four kilogrammes; cold acidulated effusions were applied to the head and in the mouth; stimulating enemata were administered, and counter-irritants employed to the limbs.

It is worthy of remark: 1. That the blood "set" in an uniformly *red clot*, without any trace of separation into *white clot;* 2. That this homogeneous clot was firmer than the ordinary black clot—due, no doubt, to the fact that the fibrin was equally diffused throughout the mass.

The animal remained in nearly the same condition for five hours! Towards eight o'clock in the evening the urgent symptoms began to subside, and some gulps of water were swallowed. A little later the patient was able to rise and to eat. The next morning all the symptoms had disappeared, and there remained only a little hesitation in walking, and some excoriations from the *decubitus* and struggling.

There was no desquamation of the epidermis, or shedding of the hair; but the pediculi, as well as their ova, were all destroyed.

The conclusions to be drawn from this observation are that the liquid carbolic acid of commerce, diluted with ten times its weight of water, should not be employed over all the surface of the body at once; that it would be well to dilute it with twenty times its weight of water at least, and not dress the body generally with this lotion at once, but by halves, and allowing an

interval of a day: commencing, for instance, with the anterior half of the body, and leaving the posterior half until a day had elapsed.*

ON THE SAME.

BY THOMAS JAMES POULTON, M.R.C.V.S., MESSING KELVEDON.

THE perusal of Mr. T. S. H. Simcock's paper "On the Toxic Effects of Carbolic Acid," recorded in the October number of your very estimable journal, was attended with feelings of interest, from the fact that it is the only one which has appeared, as far as I know, in veterinary literature. The comparatively recent introduction of this drug into medical practice, and at one time the *furore*—if I may be allowed the expression—with which it was recommended, prevented any one speaking about it except in terms of eulogy; and it is only now, on the appearance of this (Mr. Simcock's) paper, that I hasten to record an incident which occurred years ago from its use, and which has led me, perhaps unjustly, to nearly discard it (carbolic acid) from my practice.

The facts of the case are these. On the 7th January, 1870, while professionally attending some stock, my attention was directed to some *ouvriers* engaged in dressing some sheep, when one of the owners came up and informed me that Scabies had broken out in the fold of last year's lambs (104), and they were trying some of the black fluid carbolic acid, which in their previous location had won a high place in their esteem. He informed me he had bought four gallons of it from his father-in-

* In the *Field* for November 18, 1876, in an article on the cure of Sheep-scab, the extraordinary statement is made that "carbolic acid has no poisonous effect, but its irritating action on the skin is so decided that small animals, as dogs and cats, have been killed almost instantaneously when dressed with strong solutions, and fatal accidents have now and then happened when sheep have been dipped in badly-made mixtures." We wonder if the writer had ever witnessed the action of carbolic acid, or if he understands the way in which it produces death. Our experience, and that of others, indisputably prove that its irritating action on the skin is very trifling, and that, through the skin, it is an active poison. The cases recently and now recorded in the *Veterinary Journal* are conclusive on this point. We trust the readers of the *Field* will not be misled by such statements.—ED. *V. J.*

law, a local chemist, who had previously instructed him to add twenty parts of water to one of acid (no mention of potass. carb.). He thought, as he wished to get rid of such a tiresome pest, that it would be as well to reduce it still more—one of acid to ten of water. The operation was continued without any protest on my part, as prior to that period I had had no experience of its action.

The next morning, at eight a.m., I was hurriedly summoned to the flock; the man saying that unless I made haste one-half would succumb to the toxic effects of the drug. On arrival, two were found dead, one was *in articulo mortis*, from twenty to thirty were so evidently affected that death seemed the only result that could occur; whilst, with the exception of some five or six, the rest were more or less affected.

It would perhaps be as well for me, in giving the symptoms, to describe them as they were manifested in a sheep in an advanced stage; and modifications to a less degree will be sufficient for the rest. The circulation was oppressed; breathing hurried, laboured, and stertorous; ptyalism from both nose and mouth; back crouched; legs wide apart; slight coma, with a drunken, staggering gait; if the hand was placed on the back, the animal crouched still closer to the ground; surface of the skin on back hot and swollen, with deep fissures from two to three inches apart; the urine and alvine secretions scanty and high-coloured, and seldom voided, as the animal was unable to make use of the legs, muscles of the back, and abdominal muscles in their expulsion, unless attended with great pain; the mucous membranes highly injected; lachrymation; and the extremities hot.

Before attempting treatment, my attention was next directed to the cadaveric lesions present; though, as will readily be understood, they were but hurriedly and imperfectly noted. The mucous membrane of the stomach of one was highly injected, while the other was not quite so much so; but yet sufficient to indicate the presence of active inflammatory action. The intestines were nearly blanched, and in places were slightly contracted by spasm (Colic). This pallor extended to the other abdominal viscera, with the exception of the kidneys and the psoas muscles and fascia, which bore traces of inflammatory action. The larynx, trachea, and bronchial tubes were obstructed by a

whitish frothy mucus; their mucous surfaces were highly reddened; whilst interlobular emphysema existed in the lungs, which were also filled with a black fluid blood, showing alteration of that fluid from the action of the poison. Underneath the skin of the back, this inflammatory action was present, not only in the subcutaneous areolar tissue, but also in the muscles of the region. There was likewise effusion on the brain, with hyperæmia of the bloodvessels of that organ; this hyperæmia extended to the spinal cord. Such were the *post-mortem* appearances observed.

My attention was next directed to the treatment to be had recourse to. To those which were not in an advanced stage of poisoning, I gave an aperient, and ordered the back to be well soused with cold water. To those which were considerably affected, I ordered an ammoniacal stimulant, combined with a strong cathartic; the back of these was also to be well soused with cold water, after which a little oil was to be poured over the surface. This was the only treatment adopted; and though some may think it very simple, yet it gave plenty of occupation. I will not burden you with any lengthened details; suffice it to say that in a day or two all recovered, with the exception of the one *in articulo mortis*, and another which died of asphyxia, caused by some of the medicine passing into the trachea whilst the owner was in the act of administering it.

Unquestionably, the animals were poisoned by absorption of the carbolic acid by the skin, as in Mr. Simcock's case. It is perhaps right that we should faithfully report such occurrences, and leave them on record, as instances of thoughtlessness or ignorance on the part of the owners in using fashionable remedies, the effects of which they know little or nothing of. There is a fashion in everything—even in medicine; and it would be well, before we divest ourselves of our old habiliments, to be sure that we have donned others which will fit and wear better than they.

FŒTAL DYSTOKIA.—COMPLICATED HYDROCEPHALUS.

BY A. E. MACGILLIVRAY, V.S., BANFF, N.B.

RATHER a curious case of the above description lately happened in my practice. Having occasion to call at a farm some six miles away, when about to leave, the farmer's wife asked me to look at a cow which had been showing symptoms of calving for some hours, the *waters* having escaped, etc.

On entering the cowhouse, I found parturition further advanced than I expected, for a pair of feet were protruding from the vulva. Observing that the soles of the two feet were shown uppermost, I immediately said that it was a hind-leg presentation, or something worse. It proved to be a hind-quarter presentation (the *position lombo-sacrée* of Saint-Cyr), and very slight traction sufficed to bring away the fœtus as far as the fore-quarters, but there it came to a complete standstill. I introduced my arm into the passage, expecting to find a fore-leg turned back (so to speak), and jamming up the pelvis; but could discover no such or any other obstacle—my hand slipping quite easily all round the body of the fœtus. I now attached cords to the hind-legs above the fetlocks, and with the assistance of five or six people drew away a living fœtus. The cranium was of an immense size, and precisely similar in shape to the illustration given at page 403 of Saint-Cyr's "Veterinary Obstetrics."

But what rendered the extraction of the fœtus so difficult, and the case so uncommon, interesting, and complicated, was the fact that one of the fore-legs passed right over the top of the enlarged cranium (from occiput to muzzle), and was, in fact, partially imbedded in a groove during its whole course along the abnormally large fœtal cranium. This mal-positioned leg must have been there for months, as the bones of the cranium were quite firm and unyielding; and the erratic leg persisted in keeping its *cranial* position even after delivery.

This mal-postured fœtal monster remained alive for a few minutes only; which the farmer's wife thought a very lucky circumstance, as she was just asking me to *make away with it* when it *went away* of itself!

LARYNGITIS, ACCOMPANIED BY RHEUMATIC INFLAMMATION OF THE JOINTS.

BY ALEXANDER LAWSON, M.R.C.V.S., MANCHESTER.

JULY 9th.—A man called at our establishment, and asked for some blister for a horse's throat, and a bottle of cough gargle, which were supplied.

13th.—This day I was asked to see the animal for which the above had been given. The horse belonged to a widow lady living a few miles out of town; and on my arrival there I was told that he was not feeding, and had still the appearance of a cold upon him. I found the usual symptoms of Catarrh, accompanied by great difficulty in swallowing; but the pulse was natural, the mucous membranes not at all injected, breathing tranquil, no swelling of the extremities, nor anything to denote other complications beyond those already stated. In consequence of the extreme difficulty in deglutition, I thought it advisable to re-blister the throat and glands, which had only been partially done by the coachman; and left a little belladonna gargle, a gulp of which was to be given occasionally. I promised to pay another visit early next morning.

14th.—I found the patient much worse: the act of deglutition was performed with difficulty, the pulse was accelerated, and there was a free discharge from the nostrils; the mucous membranes were highly injected, and the breathing was difficult. Continued warm water fomentations to the frontal sinuses and the laryngeal box; varied, for an hour, with a warm linseed poultice to the latter.

Midday.—As there was now some danger of suffocation, I returned at midday, to find the animal a little easier. Continued the same treatment until evening, when I was afraid I should have to perform the operation of tracheotomy, as breathing was accomplished with very great effort, and the noise made was distinctly heard fifty yards from the box door. However, after waiting some little time, I decided not to operate, but to continue the poultices to the throat and fomentations to the head all night; I also told the coachman to place some gruel before the horse occasionally, and to continue the gargle.

15th.—Pulse about 72, and very feeble. The throat was better; but the discharge from the nostrils was, if anything, worse, and continuous, with a peculiar fœtid odour. The breathing was a little easier. I now noticed a considerable swelling on *the left stifle* and both hind-fetlocks, accompanied by a great amount of pain, which was evinced by an alternate changing of the weight from one limb to another. The horse became so weak while I was present, that he fell, and was unable to rise. I immediately sent for slings, and got him comfortably placed in them. Recommended hot fomentations to the stifle and fetlocks, and kept on an ordinary cold swab round both feet. In the evening I returned, and found *the right stifle* affected, the other being considerably improved. Horse still unable to stand without the assistance of the slings. The throat being much better, he was able to drink a little gruel and eat some warm bran mash. The discharge from the nostrils was less, and of a more healthy character. Ordered the fomentations to be continued to the limbs only, keeping the cold swabs round the feet, and supporting him with stimulants—principally carbonate of ammonia and beer.

16th.—Pulse about the same—72. He seemed very much easier this morning, but still restless, in a good deal of pain, and could not stand without the slings. I began to be afraid of Fever in the feet. Ordered cold water and ice to his feet, giving him a diffusible stimulant—viz., beer and carbonate of ammonia, and a sedative—aconite.

17th.—The swelling of the joints began to subside, but the pain in the feet remained about the same. The breathing was occasionally a little accelerated. Treatment the same as yesterday.

18th to 21st.—The patient appeared much about the same, suffering considerably at times from his feet, although his throat seemed to have quite recovered, and his appetite was moderately good. The discharge from the head was now little or nothing; but he was greatly debilitated, as the result of all these complications.

22nd.—My client now began to be uneasy, thinking the animal would not recover; and her wish was that he might be shot.

However, I felt confident that if he were allowed time, and received plenty of good nursing and attention, he would ultimately recover. With this end in view I obtained permission to remove the horse to our infirmary.

23rd.—I had him conveyed thither in a float, placed him in slings in one of our boxes, and continued the same treatment for about a fortnight, when he became quite well. As he was covered with bruises, however, and almost as emaciated as a skeleton, I determined to give him a month at grass. When he came home he was much improved, but still hide-bound and poor; and, to my horror, he had an enlarged submaxillary gland. I persevered, and applied a little iodine ointment to the affected part, and gave him exercise and good food. The enlargement disappeared, and the horse is now doing ordinary work.

[This case, besides its other interesting features, shows the utility of slings. Some veterinary surgeons seldom employ them; but they are, in very many and varied cases of disease and injuries, necessary to save the life, or insure the cure, of the patient. This remark may seem almost superfluous; but as some practitioners, either from a dislike to them, or the trouble attending them, or from having them of a bad pattern, rarely have recourse to them, this opportunity is taken of urging their *timely* and *judicious* employment.—ED. *V. J.*]

DIAPHRAGMATIC HERNIA.

BY R. MOORE, M.R.C.V.S., SHEFFIELD.

THIS case came before me on the 3rd November, when I was requested—Mr. Cartledge being from home—to see a valuable cart-horse, rising eight years old. On arriving at the stable, I found the animal suffering from slight abdominal pain; the pulse was a little accelerated, breathing and membranes natural; he pawed a little with his fore-feet, rubbed his left shoulder against the wall, and frequently showed a desire to eat, as if to ease himself from pain, or to distract his attention from it.

I expected to overcome these symptoms easily; but, unfortunately, they became gradually more serious, notwithstanding large anodyne draughts and other general treatment.

The case promising to be tedious, and requiring constant attention, I had him removed to our infirmary—where, however, he continued to get worse. A striking symptom now became persistent: sitting on the haunches like a dog,—so much so, indeed, that it caused considerable abrasion of the parts thus brought in contact with the ground. The membranes became injected, the pulse, which had gradually risen, became fluttering, the breathing laborious; and that characteristic symptom could be seen in the expression of the animal, which told that the case threatened early dissolution.

The horse now suffering so intensely, and the case being considered hopeless, Mr. Cartledge, who had returned—diagnosing a small rupture in the diaphragm—ordered him to be destroyed. He was in pain for twenty-seven hours.

The *post-mortem* examination revealed patches of inflammation over the bowels generally; and, on removing them, I found that about two feet of one of the small intestines had passed through a perforation in the diaphragm, and had become strangulated and twisted,—the strangulated portion being quite black, and in a mortified condition. The aperture was about an inch and a quarter in diameter, with smooth rounded edges—not a recent rupture,—and was of a circular form. It was situated in the aponeurotic portion of the left leaflet of the diaphragm, near the left pillar, and a little inferior to the *Hiatus aorticus.*

So far as was known, the horse was quite healthy prior to the attack; although, from the appearance of the rupture, this must have been in existence for a length of time, and only needed some exciting cause to bring about a fatal termination.

LOODIANA FEVER.

BY STEPHEN KNOTT, M.R.C.V.S., ROYAL ARTILLERY.

HAVING noticed in the *Veterinary Journal* for February, that Loodiana Fever, or in other words *Malignant Typhoid Fever,*

had again shown itself amongst the horses of the 1st Madras Light Cavalry, stationed at Bowenpillay, Secunderabad, I beg to submit my experience of the disease during my service in India, in the belief that the following facts may prove of interest to those members of the profession who have never heard of it before.

This is a disease which has caused a great deal of inquiry and discussion amongst the Army Veterinary Surgeons in the Bengal Presidency, as there it is mostly seen. It first owed its origin to a station called Loodiana, in Bengal: hence it is commonly known by the name of "Loodiana Fever." In the Madras Presidency it usually appears in the late monsoon time, when the heavy rains set in, commencing from August and following months, up to November, and as late as February.

Predisposing Causes.—No one as yet has been able to assign the real cause of its origin; but those who have seen and studied the disease are of opinion there are several, the chief of which are —when stabled,—want of ventilation, over-crowding, and bad drainage, combined with bad grass and water. I am of opinion it is produced principally from wet and exposure, combined with atmospherical influences brought on by an excessive downpour of rain; for when the monsoon is unusually wet, the disease is most prevalent in its worst form, and nearly every case ends fatally. I have remarked that when the monsoon was not severe, the disease was milder in its appearance. At St. Thomas' Mount, Madras, the horses are picketed out in the open, in lines which are slightly sheltered by trees. There is no stable accommodation, except in the sick lines for patients; and it was here I saw most cases of Malignant Fever during my service in India. In 1870 it attacked the horses of one of the field batteries in a mild form, and there were no casualties. In the following year I remember an isolated case—which was, however, a very malignant one, as the horse died in three-quarters of an hour after being reported off his feed. The season of 1872 was very wet, and both the batteries at the station suffered severely: horses were found dead on their pickets in the morning, having been attacked with the malady during the night. No doubt death was accelerated by the severity of the heavy rains, which caused chills, and finally

internal congestion. In the monsoon time of 1868 the rains were very heavy, and the horses of the 16th Queen's Lancers and Artillery, stationed at Bangalore, suffered considerably from the ravages of this disease. The late Mr. Richardson, who then was veterinary surgeon to the Lancers, corresponded with Professor Simonds upon the subject; and, as far as my memory serves at the present time, Professor Simonds was of opinion it was due to the excessive crop of grass, which, owing to an unusually wet monsoon, had been very considerable that year.

Symptoms.—This disease assumes more than one form, and is in some cases more malignant than in others. I shall first notice the severe form:—The patient is found to be dull, off feed, with marked prostration; pulse quick and weak, varying from 80 to 90, and sometimes 100 per minute (in many cases, however, it is imperceptible), mouth and skin very hot, very quickened respiration; visible mucous membranes of a bilious tinge, and injected, sometimes with petechiæ upon them, similar to Purpura Hæmorrhagica; breath very fœtid and hot, throat sore and deglutition difficult; bowels, as a rule, constipated, fæces sometimes clay-coloured and covered with mucus, having the appearance of boiled vermicelli; and in some cases both colicky pains and Diarrhœa are present; there is great swelling of the head and neck, which in the greater number of cases extends down to the sternum, and consequently causes laborious breathing. These are the dangerous symptoms; and the animal usually drops down dead from suffocation. Sometimes from the eyes and nostrils a yellow discharge exudes, which has the appearance of thickened serum. In some cases, prior to death the animal becomes mad, rushes round its stall and makes attempts to jump out, and finally drops down dead,—a proof that the brain is affected.

Milder Form.—All the symptoms of fever are present; but not the severe throat symptoms and swelling of the head and neck, as in the other cases: these, however, often run into the severe type.

Sanitary Measures.—Before speaking of treatment I shall name the sanitary precautions which are generally adopted.

The first thing done is to move the healthy horses away from those lines in which the disease first showed itself, and have them picketed at some distance—say a mile and a half or two miles—on some open plain, under the shelter of trees, if that shelter can be procured, and on elevated ground, so as to have better air and be kept dry in case of rain. Secondly, the troop lines are picked up and the old earth carted away. Disinfectants, such as McDougall's disinfecting powder, chloride of lime, and carbolic acid, are freely used. The earth on the floor of the sick lines is picked up and removed also, the walls of the boxes are scraped and newly whitewashed, and the whole thoroughly disinfected.

Treatment.—In the severe form of the disease treatment is of very little avail. The throat symptoms are so severe that the patient generally drops of suffocation; besides which, the action of the heart is so weak that it cannot send the blood through the lungs, and prostration is the result. In these cases tracheotomy is performed, and powerful stimulants given, to try and rouse vitality. The animal, however, generally succumbs to the disease, owing to the virulence of the throat symptoms and its utter prostration. Turpentine and mustard are applied to the throat and down the course of the trachea, in the form of counter-irritants; and also flannels which have been dipped in hot water are wrung out and applied over the turpentine. It is most essential that there should be plenty of fresh air. For nourishment, give gruel, etc., and a liberal supply of fresh water, because the patients suffer from extreme thirst, and, as a rule, will refuse everything but water. Milder cases require urgent treatment at the commencement of the disease. Should there be any or the slightest throat symptoms, counter-irritation should be employed. Calomel in small doses, given twice daily, in conjunction with James's Powder (*Pulvis Jacobi*), I have known do a great deal of good in allaying fever. In cases where there is extreme heat of the mouth, and dry tongue, ℈j of the former to ℈ij of the latter, mixed with a little sugar and a few drops of water, so as to form a paste, and placed on the patient's tongue with a spatula, is a safe way of giving it. Great benefit has been derived from the use of James's Powders;

though I believe there are many veterinary practitioners who consider it inert as a therapeutic agent for the horse. In the meantime, the common fever medicine should be given during the day—viz., Liquor ammonia acetatis, Spts. ether nitrosi, with small doses of Antim. potass. tart., and camphor: this given in a draught, and repeated every four hours, if necessary. If the pulse will warrant any extra sedative, Ext. conii added to the fever medicine will be found beneficial, as it soothes any irritability of the heart. As a rule, however, the animal is so weak that the system will not allow of any sedative whatever; although very small doses of Antim. potass. tart. assist to check fever and bring about action of the skin and kidneys. The bowels are generally constipated and filled with mucus; enemas will be found of great service in promoting action of the intestines, bringing away filthy fæces, and dispelling fœtor. Great thirst is always present; and it is advisable to keep a bucket of water in the stall, to which some nitrate of potash has been added, as this will make a very good febrifuge. Light clothing is of service, but not if the weather is close and "muggy"; if at all chilly, clothing is of course necessary, to promote surface circulation and assist diaphoresis. The most important part of the treatment is the nursing, which has to be depended upon more than the medicine; and as the patient refuses almost every kind of nourishment, it is often troublesome to know how best to support life. Small quantities of fresh grass should be given occasionally—which, being a nice succulent food, is very enticing to a sick horse. Moreover, sick horses will often take this when they will not touch anything else, provided it is green and juicy. Oatmeal made into gruel ought to be given also, if procurable. In India, however, it is expensive, and is generally substituted by a farinaceous millet called "soojie," which is equally supporting, and makes good gruel. Sponging the mouth and nostrils with fresh water occasionally assists in refreshing the patient. When convalescent, and the system is weak from disease, tonics judiciously given will do a great deal of good. Give quinine and sulphate of iron in the feeds twice daily, or in a pint of beer or porter, in cases which require stimulating. Attend to the diet and state of bowels.

Post-mortem appearances.—On cutting through the skin between the submaxillary space, and down as far as the anterior part of the sternum, you find deposited between the muscles of the neck clots of yellow gelatinous effusion, which has the appearance of fibrine and serum. Black blood also exudes through the different tissues. The submaxillary parotid glands are gorged with black blood; the lining mucous membrane of the pharynx and larynx is in a high state of inflammation,—the same with the trachea,—and, as a rule, choked up with a frothy mucous secretion which extends into the bronchial tubes; lungs in patches of inflammation and gangrene; pleuræ covered with ecchymosed spots, and particularly the costal portion; pericardium filled with serum; right and left ventricle of the heart thickened. On the bicuspid and tricuspid valves, ecchymoses are seen, varying from the size of a fourpenny-piece to that of a sixpence.

Stomach.—Mucous surface of an inflamed plum-coloured tinge, with patches of ulceration on different parts; small intestines same appearance. Cæcum and colon have a deeper plum-coloured tinge, and assume more of the gangrenous appearance; spots of ulceration also appear on different parts, and ulcers are sometimes found to have penetrated through into the abdominal cavity; rectum slightly inflamed, but in cases in which a horse, having recovered from a first, has succumbed to a second attack of fever, I have seen great ulceration, and abscesses bursting through on the external surface. Liver sometimes pale, and at other times congested; spleen dark in colour and enlarged, having a lumpy surface, from which blood as black as ink escapes when cut into; kidneys sometimes congested or ecchymosed; bladder very little wrong in appearance; mesenteric glands black in colour and gorged with blood; and between the folds of the mesentery the yellow gelatinous effusion is found, the same as between the submaxillary spaces and neck.

I have described the foregoing from notes I took at the time.

Class of Horse affected, as to Condition and Caste.—Sometimes the disease carries off the finest and youngest horses in a

battery, and those that are in the best condition ; at others, only those which are low in condition and aged.

Caste.—From experience I have found that, generally, the majority of cases occurred amongst the Australians—especially those which are underbred. I have, however, known as many Persians suffer from the disease as either the Colonial horses or other breeds of the country.

As to its being Contagious and Infectious.—Many veterinary surgeons consider that it is not infectious, whilst others are of opinion that it is. I am inclined to believe that it is highly infectious. In support of this assertion, I shall give a few instances which I well remember. A healthy colt was in a stall next to that in which was a horse suffering from Malignant Fever, and in the course of a few hours the colt was taken ill with the disease. Of two horses which were picketed side by side, one was taken ill one day, and its companion was seized a few hours afterwards. Again, of the centre lead of one of the gun teams, which worked side by side on the march, one was taken ill and died ; the other suffered and died also very shortly afterwards—possibly communicated by the breath.

Precautionary Measures.—Horses which have suffered from the disease, and are recovering and becoming convalescent, should be removed* from the "sick lines," and picketed under trees where they can get fresh air. If chilly at night, they ought to be clothed, and the legs bandaged.

During the heavy rains in the epizöoty of 1872, horses were admitted to the "sick lines" with continuous rigour. They were almost pulseless, bodies very cold, no animation about them, and were with great difficulty got to the "lines." I administered ℥iv. of brandy with ʒss. of quinine in it, diluted with a sufficient quantity of water ; and continued giving similar doses, but smaller in quantity, every four hours. I also had them clothed, and warm gruel given. I found this treatment answered, and the shivering fits were stopped. If fever came on

* My reason for having the horses removed from the sick lines, was owing to the fact that other horses would be coming in with the disease; and I considered it a good plan to remove them, otherwise they might have taken the disease again from the newly-admitted cases.

afterwards, they were treated as before stated, and fever medicine given.

I am inclined to believe this disease is more analogous to Cattle Plague than any I know of.

In conclusion, I may state that the exciting causes are, when stabled:—

Want of ventilation,
Over-crowding,
Bad drainage,
Bad grass and water,
Moisture, and exposure to inclement weather.

As regards the bad water, there can be no doubt that in the rains both animal and vegetable decaying matter is washed into the wells, causing it to become impure.

A CORROBORATION OF M. LECELLIER'S "OBSERVATIONS ON AN INTERDENTAL SPACE AND ITS EFFECTS."

BY A. G. ROLLS, M.R.C.V.S., ARUNDEL.

THIS essay was sent to the Competition of 1874, under the head of "Therapeutics and Surgery," and examined by the following Committee: MM. Trasbot, Weber, and Bouley. It was sketched as follows by M. Weber, in his report to the Société Centrale de Médecine Vétérinaire, at its meeting on October 28th, 1875:—

"An Essay on an Interdental Space, with the motto 'Seeing not Observing.' Author, M. Lecellier, veterinary surgeon, Yvetot, Seine-Inférieure."

"The object is to draw attention to an abnormal anatomical peculiarity, which becomes a serious pathological condition—viz., a space between two of the molar teeth, in one or other of the jaws, but ninety-nine times in a hundred in the lower jaw. In consequence of this space the alimentary matters accumulate between the two teeth; then is observed the putrid fermentation of these matters; the irritation they cause the gum by their pressure and putridity; the difficulty of mastication

which results; the loss of condition of the young animals; the accompanying diarrhœa; its prejudicial effect on rearing stock, etc."

Such is the series of evils which an interdental space can cause. There are two varieties; it may be present between the temporary molars: "Not being firmly fixed, the slight motion of the temporary molars is often the cause, and sometimes long before their fall, of small interdental spaces, either between themselves or between them and the first permanent molar. But this accident is of no consequence unless of long duration. The fall of the temporary molars causes it at once to disappear. *Sublata causa tollitur effectus*, says the author."

The interdental space between the temporary molars becomes much more serious, if it happens some time before their being shed; for then it impedes mastication, and prevents the foal from well nourishing itself, and at a period when a sufficient diet is the chief condition of its regular growth.

The space between the permanent teeth is a very serious accident. To give an idea of it, the author, modifying the proverb, says that one may apply to the teeth what is said of the foot—"*No foot, no horse!*" It is thus, he says, with the teeth; and, in fact, at whatever age you consider the horse, no one can contradict this assertion—the perfect action of the dental grindstones being a necessary condition for the food to be assimilated and produce strength by its transformation.

Here is substantially the author's description of the abnormal state to which he wishes to draw attention: "The six molar teeth ought to be level on their grinding and on their lateral surfaces. They ought, further, to touch very closely, from the gums to their table surface."

The anomaly commences when there is a space between them: "An interval may exist without irregularity in the dental range; but more often there is deviation of a molar, either outwards or inwards—the last being the most frequent. There may be a space before and behind the same tooth. . . . Nearly invariably, the space exists in a similar position in both rows of teeth in the same jaw; that is to say, the anomaly is symmetrical; it is much more frequent, however, in the lower than the upper jaw, in the proportion of 100 to 1. . . . . Ordinarily

the space exists between the fourth and fifth molars, or between the latter and the sixth. . . . . The space which only measures one to two millimétres at the table surface, may attain the width of one centimétre or more near the alveoli. It is possible to introduce the little finger into it. . . . . The gums, always painful, bleed at the slightest touch, especially if the superior border of the alveoli have been injured by the accumulated food. In this case there is a strong odour of caries from the mouth."

The general symptoms express loss of condition, caused by imperfect mastication.

This symptomatic exposition is preceded by interesting details on the eruption of the molar teeth,—details which are important in forming a diagnosis of the anomaly: "When I first met with the anomaly, more than thirty years since," says the author, "in the jaws of a thirty months' colt, I thought it explained by the number of teeth. Finding but five in each row, I attributed the space to the absence of a tooth; I was then ignorant that at thirty months the horse has often but five molars."

How are we to remedy this dental anomaly, which becomes a serious pathological condition? There is only one method—that is, to enlarge the dental space by drawing a tooth. The food is not retained in the enlarged space, and thus the consequences of its pressure and retention are avoided.

Here follows a description of the operation, which is not capable of analysis. It must suffice to say that the author has altered the forceps of Plasse, so as to give them more power; he has also altered the balling iron, so as to render it harmless to the bars; he uses a highly polished instrument, to keep the tongue down, and at the same time to show by reflection on its polished surface the back part of the mouth. But all these details should be read at length in the essay, in order to note the directions to follow when extracting a tooth,—an operation which increases in difficulty with the youth of an animal, in consequence of a greater length of fang being in the maxillary alveolus.

A series of twelve observations completes this essay. You

can judge, gentlemen, by this analysis, that the pathological fact to which the author directs attention is one which has not yet been noticed—at least, as far as we know. One may ask if its occurrence in the district where the author has observed it is not the consequence of some persisting hereditary influence, and if it may not disappear by a careful selection, for breeding purposes, of males and females exempt from this anomaly. It is well known that in the human being dental alterations are hereditary. So it may also be in the domestic animals. What leads us to think that the accident noticed in this work may be an accident confined to the district, and due to a local influence, is that nowhere else has it yet been mentioned. If it existed elsewhere with the same frequency which has enabled the author to amass so many observations, it must have attracted attention, from its seriousness.

"Seeing not observing," says the motto of the essay. No doubt an ironical remark, directed at those who, although the anomaly had come under their notice, have not thoroughly observed and understood it. Discovery consists in seeing what others have not seen. Now that attention has been directed to this dental anomaly, if it is general, observations will probably increase and be placed on record. To the author of this essay belongs the credit of having been the first to draw attention to this pathological condition, and to indicate its remedy.

The Committee proposed to present the author with a silver medal, and to publish his essay. At a subsequent meeting, M. Leblanc stated that he thought a silver medal not sufficient recompense for this essay. The disease described by the author, and caused by this dental defect, was unknown to the greater number of veterinarians; however, since the author drew attention to it, it has been frequently observed by his colleagues in the Seine-Inférieure. The note of the reporter also expressing a doubt as to the recompense, encourages M. Leblanc to ask that a gold medal shall be voted in place of the silver one. This was agreed to.

I have thought it worth while to bring this essay to the notice of English veterinarians, as no mention has been made

hitherto (so far as I am aware) in our literature of such a defect. It had not fallen under my notice before reading the essay; and I had quite forgotten the details and special features therein described, when, on the first of July last, I was requested to examine a five-year-old chesnut cart-horse, which had been thriving badly for some time—in fact, since his diet had been changed from hay and corn to green food. On seeing the animal, I found him very low in condition, and turned out in a small meadow, which was strewed in places with *quids*, the results of his attempts to eat grass. The foreman, in answer to my questions, said they had bred the horse, that he had not done very well when turned out, before being taken into work, but had since done better. On examining the mouth, what was my surprise to find that all the teeth were perfect and apparently regular, but that between the fourth and fifth molars on each side of the lower jaw a small space existed, which was crammed with food, and evidently the cause of the evil! M. Lecellier's essay occurred to to me; and noting the position of the irregularity, I referred to it on reaching home, and found that one of the most frequent of these cases had fallen under my notice—*i.e.*, a space between the fourth and fifth molar teeth in both rows of the lower jaw. So much annoyance did it occasion the animal, that he rejected three out of five mouthfuls of vetches I gave him.

The owner not being willing to subject the animal to the operation of extracting two teeth, I recommended an appropriate diet—chaff, crushed oats, bran, etc.—suppressing all long fodder. When last seen the animal had improved in condition, and has since then been disposed of to a dealer, in a considerably improved state.

FRACTURE OF THE NECK OF THE FEMUR IN A HORSE.

BY HARRY OLVER, M.R.C.V.S., TAMWORTH.

THE interesting report in your November number, by Mr. Naylor, of a "Fracture of the Neck of the Femur in a Horse," impels me to send you a few particulars of a similar case which

occurred in my practice some years since. I also send you the fractured bone, which you will see is almost exactly like Mr. Naylor's specimen; and should you think the second specimen would be acceptable to the Royal College of Veterinary Surgeons, I should be pleased to see it placed in the Museum, as also this report in the *Veterinary Journal*, if you can find space for it in your valuable publication.

The subject of the fracture, as in Mr. Naylor's case, was a very fine five-year-old cart-gelding.

On the 6th of November, 1873, I received a letter from Thorpe Hall, requesting my attendance on a lame horse. On my arrival there, I found my patient standing in the stable, with a cold water bandage on his fetlock, and received the following history of the lameness. It appeared that the horse, the day previously, had been sent for a load of coals in a cart. He did the journey safely, but when about to be turned around to back the cart into the coal-yard, he slipped with his hind-legs, but did not fall. He afterwards backed the coals in, but on going to the stable, was noticed to be slightly lame. They thought there was a little heat in the fetlock, so put on the cold water bandage I found the next day. On having the horse brought into the yard, he was only slightly lame; and, after examination, I gave an opinion that it was in the hip. I administered a dose of physic, and directed cold water to be continually applied to the quarter. In my examination I thought I could hear a little crepitus, but said, as I had some doubts on the matter, that I would see him again the next day. This I did, and confirmed my opinion of the first day—that a fracture had taken place; as, however, there had been several adverse opinions given by the employers, I decided to see him again before taking any active steps, and still adhered to my decision, but asked for a second opinion before the animal was slaughtered, which the owner had decided on from my opinion. Consequently, a second M.R.C.V.S. was called in. He agreed with me as to the seat of lameness, but was not satisfied that a fracture existed; consequently, acting on his advice, a cantharides blister was applied to the part, he was kept on mashes, etc., and put into a comfortable loose box. For some days he

appeared much the same, did not evince any signs of pain, except that he was lame when moved, and appeared to take an equal share of his weight when standing on the lame leg as the sound ones. On the 20th instant I received a message requesting me to attend again on that day; and, much to my surprise, I was informed, on my arrival, that I was sent for to make a *post-mortem* examination of the bay horse, the owner having directed him to be shot. I confess to feeling somewhat nervous, as I felt my reputation was at stake, especially as the "loose-breeched fraternity," as the late Professor Spooner called them, had made themselves particularly busy to show that I was undoubtedly wrong. Much, then, was my delight, on cutting into the acetabulum, to see blood flow out, and feel small portions of broken bone. On further dissection, the head of the femur was found to be completely fractured; and, although the horse had only lived a fortnight since the accident, the edges of the bones were worn quite smooth. In Mr. Naylor's case, from length of time, the bones and muscles of the quarter had become atrophied, and the animal was intensely lame and suffering much pain; but from his description I presume that, in the case which he describes, as well as in this one, the lameness at first was by no means severe, especially as the horse was put to work again. This slight lameness, as the result of the fracture of so important a bone, seems somewhat difficult to account for; but it must, I suppose, be owing to the powerful muscles attached to the trochanter major, and other parts of the bone, leaving the neck of the femur but little to do. The question then arises, How can a portion of bone so well protected by muscle become fractured? In both these cases the horses were only five years old. Could it be that the ossification of the neck had not become complete, and that the powerful muscles had actually torn the body of the bone away from the head, which would be firmly held by the *ligamentum teres?*

[This specimen is quite as interesting as Mr. Naylor's. It is now in the Museum of the Royal College of Veterinary Surgeons.—ED. *V. J.*]

MAXILLARY FIBROUS TUMOUR IN A COW.

BY T. D. BROAD, M.R.C.V.S., BATH.

On November 10th, 1876, I was requested by letter to go a distance of five miles into the country, to examine a two-year-old shorthorn heifer, which was said to have an uncommon swelling at the back of her mouth.

On examination, I found a large tumour lying on the tongue, and extending to about half its length. I was informed that the animal had been observed to have some difficulty in swallowing for a year; but she had not been examined until the previous day, being then unable to ingest any solid food. She had become very poor in condition. Having provided myself with a casting rope, a sliding balling iron, a pair of bulldog forceps, and such other instruments as I thought it possible I might require, I cast the animal, and on examination found that the tumour was firmly attached to the gums at the last molar tooth on the lower jaw; but in consequence of its extending so far into the pharynx, I could not touch the end Fortunately, the front part was lobulated, enabling me to pass a ligature of strong tarred twine over a lobule; by pulling this and at the same time drawing out the tongue (round which a thin cloth was placed, to insure a firmer hold) as much as possible, I was enabled to get my fingers behind the end of the tumour, and by exercising traction on it and the ligature at the same time, it was drawn from its attachment without leaving a particle behind. It measured eight inches long, five wide, and three deep in the centre, and weighed fully two pounds, I have sent it for your inspection.*

The heifer ate a bucketful of sloppy food within an hour after the operation, and has continued to feed well.

* Professor Duguid examined the tumour. It was very dense and hard, and composed entirely of fibrous tissue, containing both white and yellow fibres. There was no membrane covering the surface—at least, none that could be dissected off. At the anterior part it was lobulated, as stated, and some of the lobules had been subjected to a good deal of friction. The surface was apparently being covered by layers of recent exudation, which were becoming organised. The blood-vessels were mostly small, and were not by any means numerous. The specimen should be classified as one of the ordinary non-malignant fibrous growths, showing nothing in its composition foreign to the tissue from which it had grown.—Ed. *V. J.*

PERICARDITIS IN A COW.—TYPHOID FEVER IN PIGS.—LAMENESS AND SLINGING.

BY THE SAME.

On September 30th, 1876, I was called to Messrs. Wyatt's farm, at Englishcombe, to see a two-year-old heifer of the shorthorn breed, which had not fed well for the last fortnight. On examination I found the pulse to be 75 and very weak, temperature 105·5°, and the respiration quickened, with an occasional cough. Auscultation satisfied me that she was suffering from disease of the heart, the sound of which I could scarcely hear. Having had a case of Pericarditis in a two-year-old heifer of a different breed at the same farm, in Oct., 1874, and which was reported in the *Veterinarian* for 1875, I told the owners that she was also suffering from a similar disease, and that I could not advise treatment. After keeping her for nearly a week, she was killed, and I made a *post-mortem* examination. The pericardium contained about eight quarts of horribly fœtid fluid.

On the 19th of the same month, I was called to the same farm to see some pigs about two months old, two of which were dead. On making a *post-mortem* examination I saw that the disease was Typhoid Fever, and was informed that not a pig had been brought on the farm for several months. There were about the place eight sows in farrow, and four sows having from eight to ten young ones each, as well as eight store pigs. I ordered them to be kept separate as much as possible, and to be carefully fed, and the places to be kept well disinfected. The four sows and all of their young ones, with one exception, died; two of the store pigs died; two others had the disease severely, and the others slightly, but all recovered, and no other case was observed. Having been asked to account for the disease occurring under the circumstances, I gave the opinion that it had been brought from the town, four miles distant, in the food; but the owner did not then think so,—though he has since told me that he believes it was conveyed, as the malady broke out a few days afterwards and killed ten pigs on another of their farms, five miles away; both lots of pigs having been supplied with food from a tank in town, where neighbouring pork-butchers were

allowed to throw their refuse. Some of these were not particular about buying pigs when suffering from Typhoid Fever.

I have often been called in consultation in cases of lameness, the result of injury to the ligamentous structures in connection with the sesamoid joints of the hind-legs of hunters, where the treatment has been protracted and more or less unsuccessful, and that mainly from the horse not having been able to rest the joint, as he would have done had he been placed in slings at the commencement of the treatment. Although horses often lie down a great deal when suffering from acute inflammation of these structures, they are very liable to increase it in their efforts to rise,—consequently the treatment is much more effectual and certain when slings are used; and the same remark also applies to the treatment of other acute and painful diseases of the feet and legs, especially the hind ones.

VETERINARY TOXICOLOGY.—ARSENICAL POISONING IN THE HORSE: SYMPTOMS AND POST-MORTEM APPEARANCES.

BY J. GERRARD, M.R.C.V.S., MARKET DEEPING, LINCOLNSHIRE.

IT has long been known that arsenic, in its most common form of arsenious acid, is habitually administered to horses by grooms and horsekeepers, for the purpose of improving their coats and condition; and the fact that it is so much used by the farmer, as a protection of his crops from "*Bunt*" and other fungoid diseases, places it within the reach of his horsekeeper, who, not knowing the proper dose nor the poisonous nature of the drug, frequently commits himself, and makes sad havoc in his master's team.

I beg to record a case of this nature, firstly, because although such cases frequently occur, they are rarely recorded; secondly, because it may prove interesting to younger members of the profession by way of remembrance; and thirdly, because I think it may tend to throw some light on the physiology of digestion, as also that interesting pathological condition, Acute Gastritis.

A team of six powerful draught-horses, the property of Mr. Thurlby, Baston Hall, were discovered by their owner to refuse their food on coming home from drilling on the afternoon of Saturday, the 21st of October. They had been engaged in drilling wheat all the previous days of the week, and had been considered hard-wrought during that time, which, the owner thought, had probably something to do with their refusal of food; but their persistent disinclination to eat even clean corn, made him suspect something wrong. The horsekeeper, thinking that the medicine he had been giving them had something to do with the failure of their appetites, suggested to his master the probability that "they were affected from the 'dressing' among the wheat, as the wind had been blowing strongly, and probably some of it had found its way up their nostrils and in at their eyes;" and pretended that he was himself affected by it, in following the drill.

I saw them at eight p.m. of the 21st, when the following symptoms were present: Almost total refusal of food, extreme dulness of appearance, half-closed eyes, hanging down their heads or resting them on their mangers, when some of them would take a mouthful, give it a few munches, and relapse into somnolence again. The external temperature was normal, but the internal of several of them stood at 104° Fahr.; two of them only registered the normal temperature. Pulse in all of them increased in frequency—some more than others; and in those in which the pulsations were most numerous, weakness was most observable. The number per minute varied from 60 to 95; but was very unsteady in those having the high temperature, in which at times it was scarcely perceptible at the jaw, but was easily felt at the axilla. Respiration, in four of them, not affected, but in two slightly increased at intervals. Conjunctival membranes heightened in colour, and buccal membranes had a clammy, pasty feel, and in one of them continual flapping of the lips, producing a frothy mucus. No thirst was present; at least, none of them would drink on coming home from drill, although they had drunk their usual quantity in the morning previous to being fed, or before their food was offered them,—for it turned out that they did not eat anything before going to

work in the morning, and to divert suspicion the keeper had taken back all their morning meal to the heap of cut straw forming their chaff in the barn, and which was the means of detecting him, it having been moistened and mixed with the maize and oats in their mangers. One of them was purging very badly, and staled frequently, but no colicky pains at this time were present in any of them. Towards midnight this one began to be very uneasy, offering to lie down, breathing excited, pulse accelerated, clammy sweats broke out on some parts of the body, extremities became cold, internal temperature 105° Fahr., and her general appearance haggard and dejected; every symptom, in fact, of a speedy dissolution.

In addition to the usual iron, magnesia, milk and lard antidotes, which they all received, I gave this one chloral hydrate ʒij in solution, which had a most marked effect in allaying the irritability of the system, and even lowering the temperature, and with opiate injections so far relieved the urgent symptoms, for some hours, as to give hopes of recovery.

Towards noon of the 22nd, however, she suddenly became worse, notwithstanding repeated doses of the drug; and lingered on in great pain until the morning of the 23rd, when she died in extreme agony, straining, groaning, and at times convulsed.

I may remark, here, that there was no tympany, no throwing herself down, rolling on her back or rolling over, and sitting on her haunches, such as we generally find in bowel complaints of the horse; on the contrary, she lay down carefully, never attempted to roll, lay on her side, strained and groaned fearfully, and frequently voided fæces when down. She generally micturated when she got up—small quantities and very high colour, seemed to have great difficulty in maintaining the standing posture towards the close, and could scarcely get up when down, though this was attempted a good many times before the final fall.

There were no "eructations" or "antiperistalsis," generally present with an overloaded stomach, but the ocular evidences of an inflamed one, in the shape of violent, persistent pain, and extreme anxiety of expression, tumultuous action of the heart, with almost no pulsation at the jaw, extremities deathy cold, with clammy sweats on the neck, chest, and abdomen.

Victim No. 2 had not had such a large share of the poison, for although she refused food from the time of her being amiss, no urgent symptoms of the drug were perceived until the morning of the 23rd—a few hours before the death of the first one. Her eye dull, but not anxious; and but for the heightened temperature, quickened pulse, and disinclination to feed, no one could have observed anything wrong. She had been taken suddenly ill early in the morning of the 23rd, so that I was hurriedly summoned,—(and saw the finale of the previcus one,)—as we had thought her out of danger. The usual antidotes had been administered in large quantities, with the addition of milk and gruel, etc., to support the strength and "*exercise their mechanical influence*," as set forth in Finlay Dun's "Veterinary Medicines," —but all to no purpose, for she lingered on, in great agony at times, for nearly thirty hours after, as she died about noon of the 24th. The greatest difficulty was experienced in getting medicine, or indeed anything, down this animal's œsophagus; and when her head was set at liberty it flowed out again, through the mouth and nose. I therefore administered, subcutaneously, six grains of morphia, three times, at intervals of two hours, without producing the slightest effect; so I resolved to let her die without further interference. The symptoms exhibited by her were almost precisely similar to the first one, with the exception of a persistent flapping of the lips, a quantity of frothy mucus flowing from them, and a regurgitation in the œsophagus, arising from the stomach being unable to receive the fluids that had been attempted to be poured into it. No attempts to vomit in either of them. She died about eight o'clock on the morning of the 24th, or about 120 hours after she had partaken of the poisoned provender.

Sectio Cadaveris (*one* hour after death).—Although a strong, well-conditioned five-year-old, the carcase was very much reduced by this five days' irritation. The voluminous belly of the Lincolnshire cart-horse had completely disappeared,—not only the contents, but the abdominal muscles were fearfully shrunken and contracted; indeed, the appearance was more like that of a racer or steeplechaser than a heavy cart-horse, with the exception of the legs, which maintained their bulk. The fat

of the body had a yellowish tinge, the blood everywhere dark and fluid; the intestines and their peritoneal tunic of a dark venous hue, while the lining membrane of the stomach was red and inflamed, and the mesenteric glands swollen.

The stomach was distended with solid food, notwithstanding the quantity of fluid that had been poured into it. The ingesta—what she had eaten five days previously—was very dry, and showed no tendency to decomposition or digestion, except the portions of it in contact with the mucous membrane, which were mixed up with a yellowish-white pasty lymph and mucus, evidently the effusion of the inflamed membrane. This condition was most apparent along the greater curvature; while on the lesser curvature the food was in a soft and more natural condition, as if the fluids administered during the disease had passed on through the pylorus without mixing with the bulk of the food in the stomach. This suggestion is strengthened by the fact that a good quantity of catechu in solution, and *tinct. opii*, was administered in the early part of the attack, with a view to controlling the excessive purging, and no trace of either was to be found except in the cæcum and colon.

The effect of the poison was most apparent on the villous coat, while the cuticular portion was almost unaffected. One fact connected with the latter is worthy of notice here. To it almost exclusively the larvæ of the bots adhere; but in this case the poison had completely effectuated their removal, for they were mixed with the ingesta, and the punctuated or partially perforated appearance of the cuticular coat, caused by the action of their hooks, contrasted beautifully with the swollen, inflamed and ulcerated condition of the villous portion.

The inflammation of this coat was of a fibrinous form, having on several parts a film of coagulable lymph, to which some of the particles of food adhered, and on being stripped off exposed the turgid, red, and in some small spots dusky brown, appearance of the membrane.

At the points where the colour was deepest small sloughs were apparent, which, when cleaned away, left a small irregular ulcer. This was most observable along the greater curvature; while towards the pylorus the membrane was much

thickened by extravasation of blood into the submucous tissue, but there was no ulceration. The extravasation was visible in the duodenum, and here and there throughout the small intestines; but in the cæcum and colon the uniform blush of inflammation was visible on their membranes. The contents were very watery and dark-coloured, and in the rectum streaks of blood were seen. The kidneys were large, soft, and flabby, and contained a large quantity of blood. The bladder in both cases was empty of urine, and contracted. In both, it contained a quantity of fibrinous exudation, with strong vascular injection of the mucous lining, and with more or less thickening of the membrane in the vicinity of the neck and fundus. This condition of the bladder I am almost inclined to regard as pathognomonic of arsenical poisoning; at least, when taken in connection with a highly inflamed state of the mucous membrane of the the stomach, and no knowledge of the cause thereof, it may be regarded as very strong evidence of such a condition.

The liver, in both cases, was large, being gorged with black fluid blood; but no structural disease was observable. The lungs, in the one which died first, were emphysematous on the anterior and inferior borders, and congested in the body of the organs, with a large quantity of blood flowing from them when cut into.

The cavities of the heart in both were filled with dark fluid blood, which did not coagulate readily on exposure; the liquor pericardii increased in quantity and of a darker hue.

The brains I did not examine.

In the stomach of the one which died first, and which had evidently got the largest share of the drug, the ulceration was more easily observed; the inflammation was more extensive and had been most intense. Some of the arsenious acid was visible among the food in the stomach slightly moistened, and when exposed to the sun for a few hours was easily recognised. Its action on the mucous membrane of the bladder was well marked. The fibrinous inflammatory products were in larger quantity in both viscera than in the other mare's, and seemed to be in direct ratio to the amount of the poison or irritant applied. No approximation to the quantity adminis-

tered to each could be obtained, but we were left to conjecture from appearances and the quicker collapse of the one than the other.

Both stomachs were well filled with dry food, and no fluids scarcely, bloody or serous, were observable; the effusion from the inflamed surfaces was of a whitish-yellow colour and pasty consistence. The thickening of the membranes was only visible about the pylorus; on the other portion of the villous coat they had a spongy, fungoid appearance, which could not be well seen until the fibrinous layer or film was washed off; while the cuticular coat was quite normal, with the exception already mentioned of the perforated appearance caused by the attachment of the bots to it, and which, I think, may almost be regarded as a normal condition of the horse's stomach in this and more southern latitudes. I did not attempt any microscopical examination of the inflamed structures, or chemical tests to the fluids or secretions, as the evidences of arsenical action were only too apparent, and the keeper was obliged to admit his culpability in the matter.

The others gradually recovered, but suffered more or less for several days from the effects of the poison.

No one, I presume, will be prepared to deny that these were well-marked cases of Acute Gastritis, induced by arsenious acid, and which is seldom or ever induced but by chemical or mechanical agency, or at least rarely witnessed in what is known as idiopathy.

They presented symptoms and appearances so different from those recorded by Mr. Howard, in the July number of the *Veterinary Journal*, and by him regarded as diagnostic and pathognomonic of inflammation of the stomach of the horse, that I have narrated them thus fully, and as minutely as possible, to form, as it were, a basis for future reasoning on the subject.

I had intended, ere now, to have noticed some of the rather novel ideas in Mr. Howard's *brochure* on this subject; but press of business has hitherto prevented me from attempting an analysis of them, as they require rather more thought and exactitude than "Jottings at Random."

These cases seem to have been accidentally or providentially thrown in my way to assist my cogitations on this subject; and if you, sir, and the Fates are favourable, I shall endeavour to present them to your readers in an early number.

POISONING BY TOBACCO.

BY THE SAME.

MR. HOWARD'S case on this subject in your issue for November —cogent and unique—brings to my recollection, and induces me to record, a fatal case of poisoning by this agent; especially as it bears so closely on the subject of Gastritis in the horse.

It was one of those cases, so graphically described by Mr. Howard, in which the pretensions of the attendants of horses to doctor them are favoured by the impecuniosity of the owners. They are worthy of record, to show us the necessity and utility of attending to small things.

I was suddenly summoned, on the morning of the 30th of March, 1873, to attend a horse which had been ill from Colic all night, and, as the messenger expressed it, "*his guts were comin' oot.*" I reached the subject of this interesting condition as speedily as possible, and found him lying on the ground in a dying state, and about fifteen inches of the rectum protruding. It was much swollen, and the death-struggles made it impossible to attempt its return, or to administer anything; and he died within half an hour after my arrival.

I could learn nothing from the attendant or the owner to account for this sudden collapse. He was a middle-aged horse of good action and substance, had never been known to be unwell previous to this sudden attack, and there was no suspicion of anything of a poisonous nature having been administered, or which he could have partaken of in any way; and he had been at regular work up to this time.

I was at a loss how to account for such an unusual occurrence. I had seen at least one case of *prolapsus ani* from super-purgation, but all knowledge of any medicine being given was stoutly denied.

The subsequent examination revealed the fact of some ex-

tremely irritant substance having found its way into the stomach and induced an unmistakable case of Gastro-enteritis. The stomach was all but empty—the villous portion highly inflamed, thickened, and approaching a brownish-black colour. This colour was confined to one spot, about the size of a crown-piece, on the larger curvature, where it was shaded off towards the greater *cul-de-sac*. Towards the *antrum pylori* the mucous membrane had more of a normal hue; it was thickened, and covered with a viscid mucous secretion. No ulceration, but a pulpy, velvety appearance where the colour was deepest. The mucous membrane of the small intestines was highly congested, and the bloodvessels hyperæmic along the whole course of the mesentery. In the colon and cæcum, especially the former, effusion had taken place, but not so extensive as we usually find in Enteritis pure and simple.

My notes do not furnish me with the condition of the bladder, or any peculiarity of the other organs. I confined my inquiries to the cause of death, and I was able to say very decidedly that some drug had been given. To this the keeper replied, in the presence of the owner, that "he had given him nothing but two ounces of '*bacca*,' to kill the *bots*, and which he had given to horses scores of times." But the tobacco had not killed the bots, for they hung in clusters to the villous portion of the stomach; though it had undoubtedly been the means of causing the death of a valuable horse, worth to his owner at least fifty pounds sterling.

Whatever may be the explanation of these apparently contradictory facts and results,—whether in this or Mr. Howard's case any peculiar idiosyncrasy of constitution may have existed, or whether its being given, as in this case, on an empty stomach, when the drug would come in immediate contact with the mucous membrane and thus produce its toxic effect, I can scarcely undertake definitely to say; but I do not think, judging from recorded experiments, that two ounces of commercial tobacco can, under any circumstances, be given with impunity.

According to Hertwig, horses and oxen appeared unaffected by feeding on the fresh leaves; while it required six pounds of dried tobacco to cause death in a cow.

Orfila states that ʒiss of rappee introduced into a dog's stomach, the gullet being tied, killed the animal in nine hours; and ʒij applied to a wound killed another in an hour. Its action is very irregular, and would seem to depend on the manufacture of the substance and the peculiarities of animals.

THE DEVELOPMENT OF THE OVARY IN THE MARE.

BY AN AMERICAN STUDENT AT THE ROYAL VETERINARY SCHOOL, BERLIN.

(*Concluded from Vol.* iii., *p.* 447.)

THE changes appear mainly to depend upon the increased thickness of germ-plate, at the expense of the stroma. One is inclined to suppose that a sort of contraction is going on in the superior layers of the germ-plate. As after the filling up of a new-made wound, the walls contract and give rise to a slight depression which draws the adjoining parts (the skin) somewhat toward it in puckers; so the germ-plate, in contracting, thickening, and becoming smaller, externally constitutes a narrow groove, which draws the serosa and the apparatus attached to it (*ligamentum ovarii, fimbriæ ovarii*) towards its centrum, and forms the serosa into folds. That something like this takes place will be self-evident to those who have opportunities of making further observations. And the histological results also tend to prove the correctness of this supposition. The plate which was previously soft and rich in cells becomes at a later period thicker, and consists only of closely interlaced spindle cells. The opening in the middle of the germ-plate is at first small; then it becomes invisible; then again it appears quite perceptible; and once more it becomes small in extent. So far as I am aware, this manner of forming the groove or hilus is special, and peculiar to the horse species; for the ovaries in other animals retain the convexity of the free ovulation surface during life. Yet it would be interesting, and most instructive, to study

the ovarial development in those species most nearly related to the horse.

The development of the separate parts of the ovary follows, in general, the course delineated by Waldeyer. The formation of the furrows on the surface of the germ-plate continues also in the foal only until birth; from this period the germinal epithelium loses its importance. That part of the plate immediately under the epithelium becomes firmer and tougher. The formation of the ovum, and the separation of the follicle, begins early in the deepest layers of the germinal plate. As early as the tenth month of fœtal life such follicles are met with; and later they increase greatly in number; while sometimes the interfollicular tissue diminishes. With this numerical increase of the follicles, those lying deepest push more and more into the tissue of the germ-plate, and there they apparently receive the necessary conditions for their further development, and for the formation of the Graafian vesicles. While those follicles lying in the germ-plate grow slowly, those which have been pressed into the stroma grow rapidly. Isolated and mature Graafian vesicles were to be seen in the ovary of the fifty-one-days'-old foal. This complete development of the follicle only takes place in those situated deepest in the stroma. Not until the stroma has completely vanished, and the ovary has finished its changes of form, does a rapid development of the Graafian vesicles begin.

The physiological processes are the following. The rupture of the follicle and the development of the *corpus luteum* take place in this peculiarly-formed equine ovarium in a characteristic manner. On account of the covering of the sides of the ovarium by the folds of the serosa, the opening to the Graafian vesicle is closed in the direction of the abdominal cavity, and therefore the discharge of the ovum by this channel is impossible. Cicatrices, or *corpora lutea*, are never seen on the surface of the ovarium of the mare. The manner in which the *fimbriæ ovarii* are inserted also shows that ovulation cannot take place over the whole surface of the ovarium; for it would then be impossible for the fimbriæ to seize the ovum, and this would fall into the abdominal cavity. But extra-uterine fœtal development has never been

observed in the mare. The discharge of the ovum can therefore only take place through the groove, which is destitute of the serous covering that envelops the other parts of the ovary. Unfortunately, we seldom have an opportunity of witnessing the formation of the *corpora lutea* in this way; though Leisering has had the good fortune to see a well-developed *corpus luteum* projecting beyond the groove as a globular body. The reception of the ovum in the oviduct is assured by the manner of insertion of the *fimbriæ ovarii*.

The manner and the forces by which the follicles are impelled towards the groove are not known. Probably the connective tissue septa may press upon them, and force them along, as would appear to be indicated by the radiating course of these septa. Other influence is, however, necessary; and the increased size of the follicles, and atrophy of the septa towards the surface, may assist in this phenomenon. Pressure and traction seem necessary to bring the follicles to the groove; and these appear to be exerted by means of the organic muscular tissue situated in the stroma, and which permeates the whole substance of the ovary. The greatest effect seems, however, to be exerted by means of the radiating bundles of muscular fibres.

The further processes which contribute to the rupture of the follicle are mentioned by His, Luschka, Kölliker, Waldeyer, and others. The earlier development of the *corpus luteum* is derived from the *membrana granulosa* and the connective tissue layer of the follicular walls. We must suppose an analogous process must take place in the mare, in order to explain the formation of the *corpus luteum* towards the periphery of the ovary. This body offers no essential difference from that of other animals. In its structure it so much resembles the stroma, that it may be looked upon as a transitory condition of that substance. In addition, it may be said that the peculiar development of the ovary in the mare gives the key to certain and frequent pathological conditions. Among these we may include the frequent sterility of the mare; which may be due to the cicatrix-like closure of the groove in the serosa, which will render ovulation absolutely impossible. Such instances are by no means uncommon. The peculiar formation of the ovary also makes such

barrenness quite a possibility, as it affords an opportunity for mechanical obstruction of the opening. Cystic degeneration of the ovary is also not uncommon; indeed, such degeneration of a single follicle has been frequently observed, and these cysts generally lie under the serosa.

Only in this way is to be explained the fact of the follicles being situated at the periphery, and penetrating the muscular tissue, instead of being forced toward the groove; being thus pushed toward the periphery, they lie under the serosa (the internal impelling force being suspended), and form the cystoid degeneration alluded to.

IMPORTATION OF HORSES INTO INDIA.—Some information with regard to the importation of horses into India is given in the statement of the trade with that country for the year 1874-5, lately printed. It seems that 2548 horses, valued at £67,359, were imported into British India in that year, against 2661, valued at £70,758, in the previous year. There has thus been a small decrease; but this trade, it is stated, rises and falls without any great variation from year to year, though, on the whole, the tendency is to an increase both in the number and value of the horses imported. The largest proportion of the horses brought to India is of Australian origin, and the animals are mostly landed at Calcutta and Madras. These horses, commonly known in India as "walers," amounted during the year to 2072 in number, valued at £52,927, against 1943, valued at £49,230, in the year 1873-4, the number as well as the average value having thus slightly increased. In the number of horses imported from Australia there has not been much variation of late years, though the average value appears to have slightly declined. The recorded values, however, of all classes of free merchandise, both imported into and exported from India, must be accepted with great reserve. They have hitherto been, as a rule, accepted by the Customs authorities without question or examination; and experience proves that values thus recorded are frequently susceptible of large modification, many merchants not being very careful in regard to the figures they give to Customs officials for goods on which they have no duty to pay. The next largest importation of horses into India consists of what are called "Gulf Arabs," brought from the coast of the Persian Gulf mainly to Bombay. These amounted in the year 1874-5 to 458 in number, valued at £13,980, against 164, valued at £4,881, in the previous year—a considerable increase in the trade of that year as well as that of previous years. The rest of the imports of horses for 1874-5 is made up of ten from the United Kingdom, two from Mauritius, and six from other countries. The only important fluctuation in the trade is with the United Kingdom—the number of horses thence imported having fallen from 541, valued at £16,410, to ten, valued at £155, the lowest point reached for many years. The average value of each English horse imported is stated to have been little more than half what it was in 1873-4; but it is quite certain, *primâ facie*, that the recorded value must be rejected as untrustworthy when it shows each horse imported from England to be worth on arrival in India no more than £15 10s. Even the value returned in 1873-4 must have been below the truth.

Editorial.

A VETERINARY SCHOOL FOR AUSTRALIA.

We have frequently alluded to the great necessity there exists for a veterinary school in the antipodean section of the British Empire. The immense region which we designate Australia is essentially agricultural and pastoral, and as such bids fair to become one of the wealthiest parts of the world, and a centre for several other of our colonial possessions whose animal population is annually on the increase in numbers and value. We have often had to deplore the immense losses to which Australia has been exposed, by the invasion of exotic, or the wide-spread prevalence of indigenous, maladies among her stock; and there can be no hesitation in saying that she, like the mother country—and perhaps through the supineness and ignorance of the mother country—has suffered simply because veterinary science has had but little countenance given to it, and the empiric has found a congenial home. Veterinary surgeons are apparently few and far between, and of the sanitary inspectors of stock we believe there is not one who has studied veterinary medicine. The ravages made by preventable or curable diseases may therefore be imagined to be something very serious indeed; and these can only be controlled or suppressed by the direction, supervision, and skill of well-trained veterinarians, —educated in the country if possible, as they will obtain advantages which those taught in this part of the world cannot be expected to possess. In addition to this, dread of the introduction of contagious disorders among animals has given rise, among a few individuals, to a kind of panic which is, in several of its features, unreasonable, and has led to a total prohibition of importation—to a rabid kind of protection, in fact. This prohibition will undoubtedly re-act most injuriously upon the Colony, and to a great extent frustrate the objects of those who are so successfully endeavouring to improve the quality of stock. With a proper system of inspection and quarantine, and thoroughly trained veterinarians, there is no need for the severe and damaging measure which these alarmists have succeeded in imposing upon their country. No parallel can be drawn between England, as it was and is, and Australia at the present time. When Contagious Pleuro-pneumonia and Foot-and-mouth disease were imported into Britain—though they had existed for many years on the Continent—nothing was known of them, and they had obtained a firm and extensive footing before any attempt was made to check them; and even now suppressive measures are most defective, while the risk of danger from fresh instalments from abroad is scarcely diminished. Australia can now be in possession of all the information Europe affords with regard to contagious diseases; and she has, besides, the misfortunes and supineness of this country, as well as its faulty measures, to serve as a lesson for her guidance.

For these reasons we receive with much satisfaction the announcement that it is proposed to establish a veterinary school in Melbourne, the proposal having met with the approval of a number of influential

gentlemen of the colony. The proposer is Mr. Graham Mitchell, M.R.C.V.S., whose great experience in animal pathology in the southern hemisphere, his well-known abilities as an accomplished veterinarian, and the advantages he otherwise possesses through having kept himself *au courant* with the rapid strides recently made in veterinary science, eminently qualify him for undertaking such an arduous and responsible task. But in addition to these, Mr. Mitchell has other claims which should weigh heavily in his favour with the Colonists and the Colonial Government. It was entirely due to his skill and energy that the Colony was saved from an invasion of Foot-and-mouth disease, which the inspector, from his want of knowledge, could not recognise. This we glean from the Government Enquiry report which was published a few years ago.

The Colony is already wealthy; and if it wishes to keep its wealth undiminished, or to increase it—we might say largely—it cannot do better than institute a veterinary school on a good footing. While benefiting Australia in a very materia! sense by so doing, it will also be conferring a benefit on humanity, so far as animals are concerned, and will be directly promoting medical and agricultural science.

RABIES CANINA.

As we have so often and for so long a period pointed out, Rabies Canina is on the increase in this country; and, for all that is done to check it, it is likely to continue increasing and extending. There is what has been designated a "Veterinary Department" of the Privy Council; but, to judge from what it does, it appears to hybernate for eleven months and three weeks in the year. We certainly think the designation a mistake, as there is scarcely anything veterinary about this official recess. The Blue Book it issues contains nothing interesting or instructive to the veterinary profession—nor yet, we fear, to the general public; while, as for contagious diseases, Glanders was never, perhaps, so prevalent, Rabies is unnoticed, and altogether we don't appear to be any better off than we were before this mysterious department began to figure for so large an amount in the annual Estimates.

Certainly, so far as Glanders and Rabies are concerned, as the Irishman would say, "we are improving worse." Every year the latter scourge is becoming more serious; and we learn from the Registrar-General's report for 1874, that SIXTY-ONE HUMAN BEINGS perished from it in this country. We can scarcely doubt but that in 1875 and this year, the number will be greater. As for the destruction among valuable animals, we have no means of even guessing what this amounts to; but it must be considerable.

Scotland is now becoming as seriously invaded as England has been, and quite recently three people died of the disease in Glasgow in as many weeks. This very unusual mortality from such a terrible disorder appears to have caused a kind of panic, of which stray dogs were made the victims—for about twelve hundred were killed in that city in a very short time.

Veterinary surgeons cannot be too circumspect in handling dogs brought to them for examination, or they may pay the penalty with their life. We observe in the *Repertorium der Thierheilkunde*, of Stuttgart, just published, that Veterinary Surgeon Fischer, Frankfurt-on-the-Maine, has succumbed to the malady forty days after inoculation by a rabid dog.

The long and uncertain period of incubation of the disease is well exemplified in the case of a railway porter, who died not long ago of Rabies Canina in the Royal Free Hospital, London. He was bitten in January last by a wandering dog he had secured in a room, and which was observed soon after to be gnawing the rope with which he had tied it. It had also worried and eaten a cat. On opening the door it flew at him, and inflicted the wound, from the effects of which he perished more than *ten months* after.

In the *Veterinary Journal* (vol. iii., p. 48), we reported the recovery of a man in Berlin who manifested undoubted symptoms of Rabies—the result of a bite from a dog—the treatment being subcutaneous injections of woorara. In the *American Journal of Medical Sciences* for July, 1876, Dr. Watson, Surgeon to the Jersey City Charity, relates the case of a man suffering from what we dare scarcely doubt was Rabies, and who was evidently saved by the administration of strychnia and woorara. The patient had been bitten by a dog in November, 1875, this animal at the same time wounding four other persons, one of whom, a servant-maid, died of unmistakable Rabies in February—four days before this man became ill. The symptoms enumerated were undoubtedly those of Rabies, and at one time they were most urgent and distressing. There was a repugnance to drink cold water, but warm fluids were taken in considerable quantity.

It may be noted that a dread of water is not always present in man, and there are several instances on record in which it produced no uncomfortable sensation. Besides, a fear of fluids is sometimes witnessed in other affections very different to this. The term "Hydrophobia" is therefore inappropriate and misleading, and should be discarded by medical men. Its continuance can only be productive of evil, especially when applied to this disorder in animals. Rabid animals—by which we only mean those labouring under this contagious disease—are never afraid of water, but will eagerly drink it, and wade or swim in it voluntarily, so long as they are able. Whoever states to the contrary is ignorant of the malady, and is guilty of promulgating an unpardonable and pernicious fiction.*

The medical treatment of the patient we have referred to was based on the fact that Rabies and Tetanus belong to the same class of diseases, and the drugs used advantageously in the latter ought, therefore, to be beneficial in the former. The strychnia was given until it produced vomiting, and its influence on the disease was very marked; the woorara was substituted for it, and administered subcutaneously—with the effect, as it appeared, of curing the patient.

With regard to Rabies and Tetanus belonging to the same class of diseases, we are certainly of opinion that, so far as the dog or other animals are concerned, this *fact* is *not* a fact. In their etiology and symptomatology no two diseases could be more widely different, and there is nothing in their pathological anatomy which could be adduced to prove their analogy. Rabies is a contagious and virulent disorder; Tetanus is not: in Rabies there is no

* In "Rabies and Hydrophobia" we have given ample testimony to prove that dogs affected with this contagious disease never exhibit any repugnance to water. This is the evidence of every one acquainted with the malady, and the fact is insisted upon by those who have made the subject a life-study. For instance, Hertwig, of the Berlin Veterinary School, who enjoyed grand opportunities for observing the disease, writes: "Alle wuthkranke Hunde können Wasser und andere Flüssigkeiten sehen, lecken und saufen, und zwar in jeder Periode der Krankheit; manche suchen sogar das Wasser und lecken es mit grosser Begierde, andere zeigen nur wenig Durst, und einzelne lecken viel im Wasser, können dasselbe aber nicht gehörig hinabschlucken, weil die Zunge, der Rachen, oder auch der Schlund angeschwollene sind: aber wirklich wasserscheu ist durchaus kein toller Hund."—*Magazin für die gesammte Thierheilkunde*, 1874, p. 19.

muscular spasm, but, on the contrary, paralysis sometimes manifests itself at a very early stage: in Tetanus the intellectual faculties are unimpaired; in Rabies, and particularly the "furious form," the cerebral functions are markedly disordered. The success of the treatment does not prove that the diseases belong to the same class, but merely shows that, as in so many other instances, the same medication may be effectively adopted in widely diverse disorders.

A very regretable feature in nearly all the cases of Rabies Canina reported as occurring in the human species, and even in animals, is that no mention is made as to the condition of the dogs which inflicted the inoculating wounds. This is a grave omission, and should be repaired whenever possible. One of the most important points remaining to be ascertained, with regard to the prevention or suppression of this terribly alarming complaint, is whether the bite of an apparently healthy dog will produce it. With certain facts before us, we dare not at present positively assert that the disease may not occur *spontaneously* (if we may use the term) in the dog, or that the bite of a dog which exhibits no symptoms of Rabies may yet produce it. It is for clinical observation to solve this and other questions pertaining to the scourge; and we earnestly hope that the members of the veterinary profession will largely aid—as well they may—in such an important and essentially humane task.

Abstract of the Proceedings of the Royal College of Veterinary Surgeons, Veterinary Medical Societies, etc.

ROYAL COLLEGE OF VETERINARY SURGEONS.

SPECIAL MEETING OF COUNCIL, HELD DECEMBER 8TH, 1876.

Present—Sir F. Fitzwygram, Bart., President, in the chair; Professors Simonds, Pritchard, Brown; Messrs. Batt, Collins, J. R. Cox, Dray, Duguid, Field, Fleming, Gowing, Harpley, Hunt, Moon, Moore, Naylor, Talbott, Withers, Woodger, and the Secretary.

The SECRETARY read the notice convening the meeting.

The minutes of the last quarterly and special meetings were read and confirmed.

Correspondence.

A letter from Mr. Cartwright, of Wolverhampton, regretting his inability to attend the present meeting.

The SECRETARY announced that the President had received from the Secretary of State for the Home Department, copies of licensed certificates granted under Act of Parliament to perform experiments on living animals.

A letter, dated October 10, was received from Mr. Powys, Secretary of the Royal Veterinary College, acknowledging receipt of copies of Education Scheme and of amended Bye-laws to be laid before the Governors at their next meeting.

Also another letter from Mr. Powys, enclosing copy of the amended regulations relating to students of the Royal Veterinary College.

Letter from Dr. Dunsmure, acknowledging receipt of Education Scheme, and relative to the new Bye-laws of the Board of Examiners prior to July next.

A letter from Professor Walley, wishing to be informed whether Mr. Gregory would be eligible for the minor examination in April next.

He was referred to the first paragraph of Mr. Loch's letter of July 27th

which was entered in the minute book. He had been rejected twice under the new system, and therefore he was eligible to come up once more.

A letter from Professor Simonds, stating that the Governors of the Royal Veterinary College were of opinion that the Examinations ought to begin on the 3rd or 4th of January next, instead of before Christmas.

A letter from Mr. Mayer, wishing to be informed when the Christmas Examinations were to be held, as he wished to make arrangements with the Cirencester Agricultural College.

He was informed of the wish of the Governors of the Royal Veterinary College.

Letters had been received from members of the Court of Examiners approving of five o'clock instead of six o'clock for the Examinations to commence.

Dr. BURDON SANDERSON said that it would be inconvenient to him, but he did not object if the others were agreeable.

The Court of Examiners was informed that, in consequence of the alteration in the Bye-laws, a new Board would be elected prior to July, 1877, and that the ensuing Examinations would be held in January, instead of before Christmas and notice given to the London and Scottish section of the Board of Examiners.

A letter from Professor Simonds, enclosing letter from Mr. Mead, surgeon, of Dublin, who was desirous of entering the Royal Veterinary College under the new Bye-laws; but he could not give Mr. Mead the information, not having a copy of the Bye-laws.

The Secretary stated that a copy of the Bye-laws had since been sent to Professor Simonds.

Also a second letter from Mr. Mead, stating that he was anxiously awaiting the result of his application to be admitted to the Royal Veterinary College under the new Bye-laws now under discussion.

At the request of the President, a copy of the Bye-laws was sent to Mr. Mead.

A letter from Mr. Daniel McLean, Glasgow, stating that he would be glad to act if re-elected an Examiner, and asking to be informed what the new Bye-laws were.

He was informed that the Bye-laws were under the discussion of the Council, and when settled the information would be duly sent. A copy of the Education Scheme was sent to him.

A letter from Mr. Mackenzie, Frank Street, Rochester, N.Y., asking for copies of certificates of Mr. E. Crundell and Mr. James A. Going, relative to their being members of the Royal College of Veterinary Surgeons, enclosing a post-office order to defray their expense.

A letter from Mr. Henry Bergh, Head Quarters of the Society for the Prevention of Cruelty to Animals, New York, asking for a copy of the Register, as there were many who were assuming the title who were not members of the Royal College of Veterinary Surgeons.

He was informed that the Register was out of print, and that a new edition would be issued in the spring of next year.

A letter from Mr. A. F. Florens, Port Louis, Mauritius, stating that he was threatened with an action at law for saying that Mr. C. A. Bradshaw was not a member of the Royal College of Veterinary Surgeons. The name, it was stated, was not in the Register dated 1866; but another copy was furnished to him in which Mr. Bradshaw's name appeared, dated 1873.

The following letter from Mr. Loch was read in reference to the scale of fees to veterinary surgeons in giving evidence in a court of law, in reply to an application made by the Lancashire Veterinary Medical Society;—

"8, Great George Street, Westminster, November 8, 1876.

"DEAR SIR FREDERICK,—I cannot make out that there is any scale of fees binding upon veterinary surgeons. I presume you mean for their professional charges. If they give evidence in a court of law they would be entitled to charge like other witnesses.

"I may add, what I suppose you know, that surgeons in general have a *legal right* to their fees—which are payments for services actually rendered.

(Signed) "W. A. LOCH."

The Secretary stated that Mr. Dacre had acknowledged the receipt of the letter, and the following reply was addressed to the President :—

"Altrincham, December 1, 1876.

"SIR,—I have the honour to place before you an extract from the minutes of the last meeting of the Lancashire Veterinary Medical Association.

"Mr. Alexander Lawson proposed that the Secretary be directed to write to the President of the Royal College of Veterinary Surgeons, informing him,—

"First, That Mr. W. A. Taylor did not communicate with Mr. Coates in an official capacity when asking for a copy of the New Charter.

"Secondly, That the Society was not satisfied with the explanation given by Mr. Coates of his alleged partiality.

"Thirdly, That the members of this Society respectfully ask for a further investigation of the matter. Mr. Howell seconded the motion, which was agreed to. (Signed) "WM. DACRE, *Hon. Sec.*"

In reply to this, the Secretary said that he had written to the President to the effect that he had no partiality at all in the matter, and that he had no authority, as stated in the minutes of the last meeting, to send any official document without the sanction of the Council. As regarded Mr. Taylor, he had no partiality in the case.

The PRESIDENT said it seemed to him that the question in this case was not whether Mr. Coates was right in supposing that Mr. Taylor acted as the agent of the Lancashire Society, but whether he really thought so. If he thought so, he was quite justified so far as his answer went. The only important point was the *bona fides* of Mr. Coates' answer: whether he was mistaken or not was immaterial. He proposed that an answer to that effect be sent.

Presentations to the Library.

A letter from Professor Law, Cornell University, Ithaca, in which he desired to present to the library of the Royal College of Veterinary Surgeons a copy of his work entitled "The Farmers' Veterinary Adviser;" also a pamphlet, entitled "Hereditary Entailments in Domestic Animals, and in the Human Family."

The SECRETARY also announced that Mr. Fleming had presented the third and fourth parts of his text-book on "Veterinary Obstetrics;" and that Mr. J. H. Steele had presented his work on "Outlines of Equine Anatomy."

On the motion of Mr. DRAY, seconded by Mr. MOORE, the three gentlemen were thanked for their presentations.

Presentations to the Museum.

The SECRETARY stated that Mr. Fleming had also presented to the Museum of the College a fractured femur from Mr. Olver; three ancient Roman shoes; specimens of shoes for frost, and implements for making them; also a model foot of Hartmann's patent foot-pad.

Mr. FLEMING explained that the specimen of femur was sent by Mr. Olver, of Tamworth, through him.

Mr. DRAY moved, and Mr. MOORE seconded, a vote of thanks to Mr.

Fleming, which was carried unanimously; and a similar compliment was passed to Mr. Olver, on the motion of Professor SIMONDS, seconded by Mr. HUNT.

A letter was read from Mr. R. B. Paterson, Belle Vue, Dumfries, tendering his resignation as Examiner, in consequence of the unsatisfactory state of his health.

On the motion of Mr. DRAY, seconded by Mr. NAYLOR, the resignation was accepted; and the Secretary was instructed to write to Mr. Paterson expressing sympathy with him, and regretting the cause of his resignation.

Royal Agricultural Society's Prizes.

The SECRETARY stated that a letter had been received from Mr. Jenkins, Secretary of the above Society, wishing to be informed as to the steps taken by the Council in regard to the Examination for the Society's Medals and Prizes, which was arranged to take place in December next. A second letter had been received from Mr. Jenkins, in which the postponement of the Council Meeting was thought unfortunate, and asking whether steps could not at once be taken to inform qualified graduates of the prizes.

The SECRETARY stated that a reply had been sent to the effect that the candidates eligible for the prize were nine in number. Three had written to say that they would compete for the prizes; three had declined; and from three no replies had been received.

Professor SIMONDS suggested that the latter three gentlemen should be again written to, as their reply might have been delayed by a variety of circumstances.

In reply to Professor Simonds,

The SECRETARY stated that at present no time had been fixed for the examination. He had sent an extract from the Regulations of the Society's Prizes to each of the competitors.

Appointment of Examiners.

Mr. Mayer, Mr. Hunt, and Mr. Dan Gresswell of Louth were appointed Examiners, and, failing Mr. Gresswell, Mr. Lepper of Aylesbury.

After some conversation,

Professor SIMONDS suggested that the Council should prepare a scheme and submit it to the Examiners. He thought it would also be prudent not to hold the Examination at the College.

The PRESIDENT thought it was desirable that the period of the Examination should be fixed for a certain date. As regarded the farm or place at which the Examinations should be held, he would recommend the Examiners to settle where it would be two or three days beforehand, as it would add to the *bona fides* of the Examination not to know where it would take place. He would also move the appointment of a small Committee to draw up the rules and regulations for the guidance of the Examiners.

The President, Professor Simonds, Mr. Cox, and Mr. Duguid were then appointed members of the Committee.

Professor SIMONDS considered that Wednesday, Thursday and Friday in the first week in January should be appointed for the Examinations in Class B, and Saturday for the Agricultural Society's prizes; and that Class A commence in the following week.

Professor SIMONDS said that at the next Quarterly Meeting he would call the attention of the Council to the necessity of considering two of the bye-laws that had recently been passed: first, the bye-law which relates to the subjects upon which the students are to be examined at the First Examination; and the other bye-law which referred to the payment of fees for examination and re-examination.

The PRESIDENT said he thought he knew to what Professor Simonds alluded in the First Examination—namely, the writing of prescriptions. The object for which the Council inserted that was to encourage the students to educate themselves in writing and spelling. It was an easy way of finding out whether or not they were deficient on that particular point.

Professor SIMONDS said that this would necessitate all the students having a knowledge of the Latin grammar. It was a very wide question, and it would be found very difficult to educate the students in Pharmacy on the First Examination by the existing rule. It would be better, however, for the Council not to anticipate the discussion, so he would merely give notice at present of his intention to call the attention of the Council to the matter at the next Quarterly Meeting.

The report of the Fellowship Committee was then considered :—

"The Fellowship Committee, appointed by the Council to take into consideration the election of First Fellows, have to report that meetings were held Oct. 28th, Nov. 3rd, 10th, and 18th.

"There are 1016 members of the College on the Register who have been fifteen years and upwards in practice, and who are therefore eligible for the Degree. From these a careful selection has been made by the Committee, in accordance with the instructions drawn up the Council, and also with the provisions of the Supplemental Charter.

"The Committee selected a list of 75 members proposed for Fellows."

The Council then proceeded to consider the election of Fellows with closed doors. After the names had been completed,

Professor BROWN moved "That this Council do not take advantage of the powers given them by the clause in the Charter, and that they do not make any original Fellows."

The PRESIDENT seconded the motion ; which was put and lost.

The PRESIDENT then proposed that the Secretary be instructed to write to the several gentlemen nominated, apprising them of their nomination, and asking whether they wished to accept the Fellowship under certain conditions which were to be set forth. The discussion was further adjourned.

The SECRETARY informed the Treasurer that it would be necessary to draw cheques for Examination fees and Insurances at Christmas, and that the balance at the bankers' to the credit of the Royal College of Veterinary Surgeons was only £83 16*s.* 4*d.*

It was moved by the PRESIDENT and seconded by Mr. BATT, "That the Treasurer having represented that there are no funds to meet the liabilities, the Trustees be authorised to sell out £200 stock, and take steps to furnish him with money."

The motion was carried.

The Worshipful Company of Farriers.

Mr. FIELD said that the above Company was desirous that the Council should appoint three Examiners to co-operate with them in selecting candidates for their prizes. He had received a letter, dated Dec. 4th, from the Clerk of the Company, forwarding a copy of the Report of the Farriers' Committee on the prizes and the proposed advertisements relating thereto. The following were the regulations in connection with the three prizes offered by the Company :—

"1. 1st Prize—The Freedom of the Company, a Gold Medal, and £20.
2nd „ —A Silver Medal and £10.
3rd „ —A Bronze Medal and £5.

"These prizes to be awarded by Judges to be appointed by the Company, consisting of three Members of the Council of the Royal College of Veterinary Surgeons and three Assistants of the Court of Farriers.

"2. The first prize to be for the best Essay on the treatment, in health and disease, of Harness Horses for driving or draught purposes in London—*i.e.*, within a radius of seven miles of the Bank of England; competitors to be limited to M.R.C.V.S. and students of the Royal Veterinary College, and the essay not to exceed in length 160 lines of sixteen words in each line (the essays to be legibly written on one side only of half-sheets of blue foolscap paper, and each such half-sheet to be numbered consecutively and not to have more than two hundred words thereupon, and each line to be one inch apart from the preceding line); and the Company to have the right to print and publish the Prize Essay within twelve months from the Prize for the same being awarded, on the understanding that half of the nett profits are to be given to the author when realised.

"Each Essay to be addressed, prepaid, to the Clerk of the Company, at his Office, No. 35, Ely Place, Holborn, London, E.C., and to be sent in to him on or before the 31st day of January next; and the Judges to adjudicate upon the essays so sent in on or before the 28th day of February next.

"3. The second prize to be for the best and most economically made and useful set of (4) Shoes for Carriage Horses used in London, over Macadam, Stones, Asphalte, and Wood Roadways—regard being paid especially to slipperiness arising from damp, frost, snow, and heat.

"4. The third prize to be for a similar set of Shoes for Cart Horses used in London, over aforesaid roadways, and with like regard.

"5. The competitors for the second and third prizes to be either Army Farriers quartered in England, or actual working Farriers employed for not less than two years now last past at their own or some Master Farrier's Forge in London or Westminster, or within seven miles thereof, in the practical making of shoes for and shoeing of horses.

"6. The competition set of shoes to be and remain in each case the sole property of the Company, and unregistered and unpatented, and to be sent in by the competitors at their own expense to 224, Oxford Street, W. (addressed "Farriers' Company Prize," No.), two months before the day the prizes are to be awarded; and the Judges therefrom to select, by personal trial or otherwise, as they may deem expedient, six or some lesser number of sets of shoes in each case (for prizes 2 and 3), and the makers of such selected sets of shoes respectively to attend personally before the Judges, or some of them, on a day and at a place and time to be named by the said Judges, and then and there personally to make a set of shoes similar to the set sent in by them respectively, and the Judges when the shoes are so made —and if required have been tried—to award the prizes Nos. 2 and 3.

"7. The Company to have the right of withdrawing all or any of the prizes, if the Judges do not consider the essays or sets of shoes of the respective competitors for the same to be of sufficient merit.

"8. Intending competitors for the three prizes respectively to send in their correct names, addresses and occupations to the Clerk of the Company on or before the 18th day of December, 1876, and to pay therewith the following entrance fees, viz. :—

	£	s.	d.
"For prize No. 1	1	1	0
" " 2	0	5	0
" " 3	0	2	6

"The whole of the entrance fees will be appropriated for furthering the above objects, and no part thereof will be retained by the Company. To be

advertised in *The Times, Daily News, Standard, Daily Telegraph*, and *City Press*."

Mr. J. R. Cox, Mr. Batt and Mr. Fleming were appointed Examiners to co-operate with the Farriers' Company.

The Secretary stated that he had received a letter from the Veterinary Medical Society, thanking the Council for the use of the Board Room during the past year to October last, and asking for a continuance of the same. This was agreed to.

The proceedings then terminated.

CENTRAL VETERINARY MEDICAL SOCIETY.

THE ordinary monthly meeting of this society was held at Red Lion Square on Dec. 7th, Mr. W. Field, jun., President, in the chair.

The President exhibited a diseased kidney from a horse, and described the case. Mr. Fleming exhibited the following pathological specimens, and gave their history: 1. The heart of a foal affected with Endocarditis, chiefly on the right side, and involving the mitral and tricuspid valves;* 2. Fracture of the neck of the femur;* 3. Intussusception of more than a foot of intestine in a mastiff dog; 4. Piece of bone extracted from the rectum of a dog; 5. Concretion from the stomach of a sheep; 6. Large mammary tumour removed from a bitch; 7. False membranes coughed up from the bronchial tubes of an ox. Mr. Fleming also exhibited an invention for preventing horses from kicking in the stable;† likewise devices for enabling horses to travel on ice and slippery roads: among them his own invention; the "Hufbuffer" of Mr. Hartmann; the shoe and plugs of M. Gerard, etc. With regard to Hartmann's foot-pad, the President expressed his approval of it after a trial of some months, though its expense was a serious consideration. Mr. Burrell remarked that they could not be fixed in a "knocked-up" shoe, and instead of curving the heels inwards, a rudimentary clip would suffice. Mr. Fleming showed, and commented upon, three Celtic or Roman horseshoes recently discovered at Oxford; also a "Hipposandal" found at Springhead, near Gravesend.‡ Mr. Woodger, jun., exhibited a circular pad he had designed for the treatment and prevention of "capped elbow"; this pad, fixed round the fetlock, raised the heel from contact with the elbow. Mr. Fleming suggested that his kicking-block might answer the same purpose. Mr. H. Withers adopted the plan of shortening the collar-rein on the opposite side. Mr. Roalfe Cox exhibited the specimen of aneurism of the posterior aorta recorded by him in the *Veterinary Journal* for September last. Mr. J. H. Steel presented a copy of his work "Outlines of Equine Anatomy." Mr. W. Mole, M.R.C.V.S., Golden Square, was proposed as a fellow.

Present, sixteen fellows and two visitors.

JAMES ROWE, JUN., *Hon Sec.*

YORKSHIRE VETERINARY MEDICAL SOCIETY.

THE last quarterly meeting for 1876 was held at the Queen's Hotel, Leeds, on Wednesday, the 25th October, the President (Mr. Charles Patterson) in the chair. The following members were also present—viz., Messrs. Naylor, Jos. Carter, Anderton, Cuthbert, Jos. Freeman, Ferguson, Scriven, W. G. Schofield, Spillman, Axe, W. G. Carter, Peter Walker, Fallding, and the Secretary.

* These cases will be published in the *Veterinary Journal*.

† This will also be described in the *Veterinary Journal*.

‡ These articles will be referred to in the *Veterinary Journal* for February.

Apologies for non-attendance were received from Messrs. James and John Freeman, Greaves, Edmundson, J. L. Faulkner, Schofield, jun., Murdoch, and Bale.

Mr. J. M. Axe, M.R.C.V.S., was unanimously elected a member of the Society.

Mr. GEORGE CARTER read an essay on Parturient Apoplexy, detailing the causes, symptoms, *post-mortem* appearances, and treatment of this formidable disease, with great minuteness.

Mr. NAYLOR objected to the term "Parturient Apoplexy," as he thought we had similar symptoms in other diseases; he was of opinion that the attack arose generally from indigestion, and had not seen much benefit derived from the use of slings.

Mr. ANDERTON said that after sensibility is restored, and the cow does not rise, the slings will often be found serviceable in enabling the patient to assume the upright position. He thought it very essential to give medicines with the probang, and to suspend the head from the rafter of the cowshed at about the natural height when the cow is at rest; also to turn her hourly, so as to assist in the expulsion of gas from the rumen. He considered that the use of depletive measures before parturition tended to prolong that act; he had occasionally seen congestion of the lungs present in these cases; cows are sometimes affected more than once with this disease.

Mr. JOS. FREEMAN advocated bleeding when the brain symptoms are urgent, etc.

Mr. AXE thought stimulants, with mild aperients, the best treatment.

Other gentlemen having continued the discussion, the essayist in reply stated that the exhibition of a strong dose of cathartic medicine, immediately upon symptoms of illness appearing, would often cut short the progress of the disease. Bleeding was also beneficial in the early stage, and he had seen good results from the judicious use of the slings.

A cordial and unanimous vote of thanks was awarded to the essayist.

The treasurer submitted the financial statement, which showed a balance in hand of £77 6s. 9d.

The election of officers for 1877 resulted in Professor Williams being unanimously chosen president; Messrs. Patterson (ex-president), Bale, and Pratt, vice-presidents; Mr. Cuthbert, treasurer; Mr. Broughton, secretary. Refreshments, at the invitation of the Leeds members, concluded the business of the day.

The annual meeting will be held as usual in January, when Professor Williams will deliver the inaugural address, introducing the subject "May Contagious Diseases be spontaneously generated?"

W. BROUGHTON, *Secretary.*

THE LIVERPOOL VETERINARY MEDICAL ASSOCIATION.

THE forty-ninth quarterly meeting of the Liverpool Veterinary Medical Association was held at the Medical Institute on Friday evening, November 10th, 1876, the President (Mr. Morgan) in the chair. There were present—Messrs. Gilbert Heyes, Hutcheon, C. W. Elam, Kenny, Joseph Leather, William Leather, Thomas Leather, Carlisle, Liverpool; Faulkner, Hopkin, John Lawson, S. Locke, Thomas Taylor, W. A. Taylor, Manchester; Woods, Wigan; Whittle, Worsley; Dobie, Birkenhead; Dixon, Southport; Storrar, Chester; and the Secretary. Mr. Walker, Bradford, was also present at the commencement of the proceedings, but was unable to remain to take part in the discussions.

Letters of apology were received from Messrs. Barnes, Malpas; W. A. Cartwright, Whitchurch; and W. Lewis, Crewe.

The minutes of the August meeting were read and approved.

Messrs. Dixon (Southport), and Faulkner (Manchester), were nominated for membership.

Mr. JOSEPH LEATHER gave notice that at the next meeting he should move a resolution that the annual subscription be increased from ten shillings to one pound.

The PRESIDENT reported that, pursuant to the expressed desire of the members at the last meeting, he had forwarded to Dr. Braidwood a portion of the tongue of the horse, which formed the subject for discussion, for microscopical examination. He had received a reply from Dr. Braidwood, stating that the morbid part having been immersed in glycerine and carbolic acid, it was not practicable for a satisfactory examination to be made. The President hoped that, should a similarly interesting case occur in the practice of any member, he would not fail to bring it before the Association.

Mr. T. TAYLOR, Manchester, introduced for discussion the treatment of fractured lower maxillæ, stating that he had been induced to do so from having seen a bad case treated successfully in the practice of his friend Mr. Robinson, of Greenock. He could claim for himself no credit for bringing forward the subject, but considered the mechanical appliance adopted so perfectly fulfilled the requirements of the case that it should be made generally known amongst the profession, and that the honour of the invention should be accorded in full measure to Mr. Walker, veterinary surgeon of Bradford, the inventor of the cradle, who he much regretted was unable to remain to take part in the discussion. He would read a description of the case he had seen in Scotland, which had been kindly furnished by Mr. Robinson, jun., of Greenock :—

FRACTURE OF THE INFERIOR MAXILLA.

On the 30th of March last I was called to see a horse that had sustained a severe injury to the lower jaw.

The animal, the property of the Caledonian Railway Company, was engaged pulling a "lorry" up a street with a very high gradient, when, owing to the tightness of the collar, he suddenly choked, and fell with his jaw against the pavement; the "lorry" shaft on the off side, striking him on the rhamus of the inferior maxilla, broke; the broken portion, slipping over the molar teeth of the under jaw, made a large lacerated wound of the skin, muscle, submaxillary artery, vein, and buccal membrane, and was retained in the horse's mouth until he rose.

On reaching the Company's stables, whither the horse had been conducted, I found the animal weak from hæmorrhage—the profusion of which, however, had been arrested by the use of a very long bandage, which the stable-manager, Mr. James McMurray, had the forethought to apply. On its removal there was still considerable hæmorrhage from the submaxillary artery; and after having tied it up, I found a long oblique fracture of the bone extending from behind the first molar to the centre of the fifth, commencing on the external surface of the bone at the first molar, and terminating on the internal at the fifth.

On the near side, the neck of the bone presented a comminuted fracture; the feel to the finger on pressure, all the way from the corner incisor to the first molar, being that of a sack filled loosely with small nails.

I caused the horse to be taken to our yard, where, on consulting with my father, we came to the conclusion that the best thing to be done was to wire Mr. Peter Walker, of Bradford, for the loan of his lately invented cradle. In the meantime, in order that the manager (McMurray), who is an anxious-minded man, should see that we were doing something for his horse, we obtained a sheet of gutta-percha, about half an inch in thickness, and after

heating it in warm water, moulded it to his jaws; but I must say it made a very clumsy appliance. The pulse was 90, and weak. Offered milk to drink, but the tongue seemed partially paralysed, and the animal was consequently unable to swallow.

Mr. Walker, with all possible haste, sent his cradle, which arrived in Greenock the night of the accident; but unfortunately we expected it by the Caledonian Railway, and accordingly awaited the arrival of its train. The cradle, however, arrived by the Glasgow and South-Western Railway, lay all night at the station, and was received next day. Thus the horse stood for one night with the gutta-percha apparatus, during which time he was quite unable to swallow. Next morning, however, after Mr. Walker's cradle was applied, he drank with avidity some milk and eggs.

For several days the pulse varied from 80 to 90; but the thirst was so great that he drank about three gallons of milk, at intervals (per diem), in which was given ten drops of aconite and two drachms of nitrate of potass, alternately.

By-and-by he drank four gallons of milk and one dozen of eggs daily, in which the aconite and nitrate of potass were given, for about three weeks, until the pulse was reduced to 50.

The wound was dressed with a solution of carbolic acid, and kept as clean as possible—the patient's comfort being in every way attended to. About this time, however, he began to give evidence of uneasiness; and on examination it was found that the tooth-plate of the off side was not sufficiently long to cover the second last molar, which had slipped up behind it, and was being pressed against, and therefore to a small extent opening, the fracture at that part. A longer plate was then put on, after which no untoward symptom took place.

On the seventh week from the receipt of the injury the cradle was removed, the cheeks blistered, and the horse turned into a box, where he gradually began to pick a little soft food—at first with great difficulty, from the partially paralysed condition of the lower lip, due to its long confinement. For about a fortnight he quidded his grass and hay; and I found that it was partly owing to the overgrowth of a wolf tooth, which had escaped the pressure of the tooth plate. I was a little afraid to use any violence; but about a week afterwards I ventured, and succeeded in drawing the said tooth.

Nine weeks after receiving the injury, the horse was put to work, and has been doing well ever since.

It is possible that this case of itself merits publication; it was not, however, my intention to offer it on such grounds, but I feel so much indebted to Mr. Walker for his kindness that I believe it my duty to publish it. Therefore, should this communication not find its way into one of our veterinary organs, I shall send it to the *Veterinary Journal*.

This case proves that a valuable animal need not be destroyed, although he meets with a complicated fracture of one ramus, and a comminuted fracture of the interdental portion on the other side of the bone. A more formidable case, I should think, seldom occurs; and I am thoroughly convinced that, but for the valuable cradle Mr. Walker has invented, it would have proved too formidable for reduction.

The case in point owed its success in great measure to the care and nursing it received from Mr. James McMurray, to whom, after Mr. Walker, the bulk of the credit for the animal's recovery is due.

Mr. TAYLOR related three cases of fracture of the bones of the head and face which he had under treatment at the present time.

A general discussion upon fractured maxillary bones followed; at the termination of which it was proposed by Mr. TAYLOR, seconded by Mr. HEYES,

and carried, "That a cradle for the treatment of fracture of the lower jaw, similar to the one invented by Mr. Walker and exhibited at the meeting, be provided by the Association for the use of members."

Mr. STORRAR, sen., Chester, next read the two following short papers upon interesting cases of bovine pathology, which provoked a general and instructive discussion amongst the members present.

EPILEPSIA UTERINA ET DYSPEPSIA.

In the last January number of the *Veterinary Journal*, I observe a paper by Mr. N. G. Rolls, M.R.C.V.S., Arundel, headed "Peculiar Nervous Attack in a Cow, probably due to the Removal of the Calf."

I have met with several cases, the general description of which exactly corresponds with the full and clear details given by Mr. Rolls. I will therefore read from this paper the symptoms he so lucidly gives of his cases.

[*Having read the proposed extract, Mr. Storrar resumed.*]

One of the cases in my practice occurred in March, 1875; and so severely did the cow bite the timber forming the front of her stall, that with one desperate effort she broke all her incisors except one entirely out of her jaw, and with them the alveolar processes, and I was under the necessity, after attempting to reunite them, of taking all off in a piece.—Another case, of many years' prior date, so severely injured her lower jaw, that she could not use her incisors for a good many days; but she could use her *molars* when the food was placed in her mouth.

Mr. Rolls, you will observe, looks upon his cases as caused by the removal of the calf; but this idea is not supported by any of my cases. I will therefore dismiss it as improbable.

I look upon these cases as 1st, Epileptic—the whole appearance and conduct of the animal indicating this; also, 2nd, Dyspeptic—the digestive functions being to a greater or less extent suspended; and 3rd and primarily, as Uterine. The animal affected has calved some few days previously—say from four to fourteen, or even more days; she has been heartily eating her food; giving milk *very largely*,—or, more correctly, her milk has been remarkably rich, throwing up, when left for a time, a very heavy layer of cream; and the usual uterine lochia has been suppressed. Or the case might be thus stated:—An excessive drain upon the system by the mammary glands, causing, perhaps, the suppression of the uterine cleansing, with the peculiar smell about the animal, and more marked in her milk, which is referred to by Mr. Rolls; followed by a less or more severely developed attack of indigestion. These causes act upon the nervous centres so as to produce the extraordinary excitement which has been described.

The dyspeptic signs are the more prominently shown—such as a desire to eat anything unclean in preference to good food, or coarse straw in preference to roots or hay. The bowels become torpid, and the supply of milk nearly ceases. A judicious administration of purgative medicine, with cordial and stimulant drugs, will bring the animal round, and the excessive milking will occur again during the same period.

CASE OF ULCERATION OF THE STOMACH OF A COW, ETC.

The first case I propose to turn your attention to is that of a small black Welsh cow.

She had very severe tympany, accompanied by a very peculiar wheezing sound, which at once arrested attention. This sound could be heard most distinctly over the left hypochondriac region, indicating a connexion with the stomach; it was also constant, and coincident with each inspiration and expiration—thus at once suggesting a direct communication between the stomach and the larger air passages. Pressure upon the rumen caused a

slight escape of air up the trachea, but no benefit was thus obtained by the patient. The trocar and canula were resorted to, and at once gave some measure of relief, and more fully than before established the evidence of a direct channel of communication from the rumen to the trachea; for at every inspiration air came into the stomach, and at every expiration the air escaped by the canula.

At what particular part of the organs this lesion existed, I could not satisfactorily diagnose. The probability of some sharp agent having cut its way through the œsophagus into the trachea at the posterior part was suspected; but the innumerable anatomical and physiological difficulties which at once presented themselves, precluded all hope of a satisfactory solution in that direction.

Oil, opium, and diffusible stimulants were administered, with some benefit to the poor animal; but the digestive organs were now under adverse influences, and refused again to assume their functions. Death in a few days ended the animal's sufferings.

The autopsy showed that the lining membrane of the rumen had been the subject, on many occasions, of ulceration in small patches; some were even now in existence, and other places showed cicatrices—the old wounds being very much puckered, as if pulled together under very adverse circumstances. The rumen was found very firmly adherent to the diaphragm. On looking for the cause, it was found that the point of attachment was one of these ulcerated spots; that the ulceration had passed through the coats of the stomach, and laid hold of and destroyed the diaphragm; it had also attacked the posterior lobe of the lung, fastened the lung by adhesion to the diaphragm, and, still continuing to progress, had opened a direct channel into the air tubes of the lung.

This morbid passage was carefully removed, showing the three tissues—stomach, diaphragm, and lung—all adherent, and through it a quill was easily passed. My son carried the specimen to London, where in all probability it may be in the museum of the Veterinary College.

Amongst the small stones, sand, and other rubbish found in the lower part of the rumen and reticulum, were some small but ugly clinkers, with sharp, cutting edges. These were embedded, in some instances, in the lining membrane, and probably their presence may account for the whole of the lesions I have thus described.

Mr. HOPKIN, Manchester, related two cases of paralysis of the limbs in a brewer's horses, which he attributed to some undefined abnormal condition of the food supplied to them. Some years ago he had five cases occurring in the stud of one man, also a brewer, three of which recovered and two died; the former were placed in slings, the latter were left recumbent. He found that all the cases were not precisely alike: in some the fore, in others the hind extremities were chiefly affected.

In the subsequent discussion, attention was drawn to the frequency of paralytic seizures in horses fed upon ripe, or nearly ripe, rye grass—especially marked by its prevalence in some years, and the rarity or absence of its appearance in others.

Votes of thanks were passed to Mr. Taylor, Mr. Robinson, Mr. Storrar, Mr. Hopkin, and especially to Mr. Walker, for their contributions to the Association.

The Treasurer's annual statement of accounts was read and approved.

Votes of thanks were accorded to the retiring officers, and the following gentlemen elected for the year 1877:—Mr. Woods (Wigan), President; Mr. G. Morgan (Liverpool), Mr. Jos. Leather, Mr. Thomas Taylor, Vice-presidents; Mr. Whittle (Worsley), Treasurer; Mr. Reynolds (Liverpool), Hon. Secretary.

RICHARD REYNOLDS, *Hon. Sec.*

MONTREAL VETERINARY MEDICAL ASSOCIATION.

AT the meeting of this Association held on October 26, 1876, Fred. N. McLellan, Vice-president, in the chair, there was a large number of members and visitors present.

The report on the amendment of the rules was adopted, and the membership is now open to members and students of the medical profession.

The following gentlemen were elected members : viz., D. S. Brown, Genoa, Illinois ; C. C. Miles, Charleston, Illinois ; Chas. Winslow, Rockland, Mass.; Alphonse Levesque, Montreal ; Wm. P. Mullin, Montreal ; Daniel Lemay, Bord a Plouff.

Mr. G. C. LYFORD read a communication concerning shoulder lameness in a colt, attended by interesting complications and formation of abscesses

Professor MCEACHRAN read a very interesting paper on "Conformation and Purchase of Horses." He passed in review the skeleton of the horse as a mechanical structure, pointing out the peculiarities in arrangement--necessary for different purposes ; the uses and capabilities of each part—the vertebral column being the centre of the osseous framework, having all the other parts attached, either directly or indirectly, to it, as the length and strength of its different parts will have very much to do with the perfection of the whole body. He agreed with those who looked upon the fore extremities as being merely supporters of might and the hind ones being the propellers : the attachment of those limbs plainly indicated this. The fore extremity is attached by strong muscular bands, and the angles of articulation and arrangement of the muscles all result in a beautiful elastic springy support, capable of supporting weight and preventing concussion without themselves suffering in doing so ; whereas the hind-leg is attached by a large and strong articulation in a powerful bone directly articulated to the vertebral column, and the attachment of the muscles such as to give the animal the greatest strength on those movements resulting on the extension of the limb, which, with the foot as the fixed point resting on the ground, and the upper end articulated with the pelvis, must propel the body forward. After pointing out the peculiarities required to adapt the animal for different purposes, he proceeded to explain the points of excellence to be sought for in all classes. The head should be medium in size, and proportioned to the body it belongs to ; a large, coarse head is most objectionable on all animals, the size being neither ornamental nor useful ; a small, pony head is equally objectionable, as indicating deficiency in character. The muzzle should be fine, the lips thin and compressed, the mouth deep, the nostrils large, soft, and dilatable ; if small, thick, and stiff, there will be a corresponding want of development of the lungs, and the animal will not be fitted for fast work. The eyes should be large, wide apart, and have boldness and fire, yet gentle-looking ; when they are small and sunken, with heavy, thick eyelids, especially if much of the white is shown, he is sure to be vicious, easily frightened, and untrustworthy The ears should be long and fine, firm and active-looking, rather close than wide at the top of the head, with the points a little inclined forward. Each part was thus passed in review, the lecturer pointing out the best formation of each for different purposes. On the subject of horse buying and selling, the buyer and seller in their respective characters were commented on, the trials and difficulties of the one and the sharp tricks and clever deceptions of the other explained ; and the lecturer concluded by reading an article by Cornelius O'Dowd on the trials of a gentleman on selling a horse —often as great as in buying one.

Want of space compels us to curtail our report of this very instructive

lecture, which was listened to with a great deal of pleasure and profit by the large attendance of members and visitors present.

At the next meeting, Mr. F. W. McLellan was to read a paper on "The Foot of the Horse."

NOVEMBER.

THE success of this Association, which is in connection with the Montreal Veterinary College, has been far beyond the sanguine expectation of its promoters. We notice with pleasure that each meeting is largely attended, and that progress marks each step. The Association is bound by no conventional rules, as is seen by the last amendment to the rule relating to membership, by which members of the medical profession and students of medical colleges are eligible for admission.

At the November meeting, Professor William Osler, Professor of Physiology in the McGill University, was elected Vice-president of the Association. A very exhaustive paper on the structure and uses of the several parts of the horse's foot, and the principles of shoeing, was read by Mr. F. W. MCLELLAN, Bridgeport, Connecticut; it was illustrated by sections of the foot, models and diagrams, and was followed by an animated discussion on the different theories advanced by different authorities on the subject of shoeing. The President and others agreed that there has as yet been no shoe invented equal, for all practical purposes, and protecting the foot without injuring it, to the plain seated shoe of Osmer and Moorcroft, when properly made and applied as it should be. The "Charlier" and all its modifications were found to be quite impracticable, except in a few instances, especially in pleasure horses; but when the horse had to drag heavy loads over rough roads in all seasons of the year, no other shoe yet invented was so suitable as the seated shoe properly applied.

In no other country has shoeing of horses received so much attention, or so many patents been secured, as in the United States. The President had seen almost every one of them, and tried most; and, like the late Professor Dick, he "was forced to conclude that as yet the seated shoe was the best."

Mr. ARCH. MCCORMICK, V.S., Beauharnois, next read a very practical paper on "Inflammatory Fever," or "Black Quarter" in young stock—that disease having come frequently under his notice of late in his district.

The PRESIDENT (Professor McEachran) exhibited a beautiful specimen of abscess of the pericardium in a cow, caused by half of a common hairpin. The pericardium was thickened to fully half an inch, was adherent to the lower third of the left ventricle, the remainder forming the walls of a large abscess lined by a thick pyogenic membrane, and had contained over two quarts of fluid mixed with pus, part of which was semicaseous and fœtid. The hairpin was found partly lodged in a fistulous recess in the pericardium, near the middle of the left side of the heart, and jutting into the abscess.

The history of the case was as follows:—

On the 12th October, Mr. McEachran was asked to visit the cow, which he did, accompanied by three of the students. The cow was reported to have been more or less unwell for nearly a year, but had continued to eat, and milked fairly since calving; at least, she had nursed her calf so far, it being about three weeks old. Three days before sending for advice she had given up feeding, and was rapidly getting weak. She had been owned and kept in the city for four years, and along with other feed received the slops from the house. She had not been known to lie down for several weeks, and then only for a few moments.

External Examination.—She stood with the head extended, nostrils wide, pupils dilated, countenance haggard, and general expression as if suffering greatly—each expiration being followed by a grunt.

The brisket was enormously enlarged from œdematous swellings; the elbows turned very much out; pectoral and humeral muscles greatly atrophied, the scapula seeming almost to push through the skin, and the chest being suspended as if by two mechanical props. Percussion revealed the presence of extensive effusion into the cavity of the chest on both sides, and auscultation demonstrated the same condition of the pericardiac sac—the heart's action being scarcely audible, very irregular, and its sounds impossible to describe. The breathing was quick, short, and accompanied by considerable lifting of the flanks. The surface heat was low. Diarrhœa of black bad-smelling fæces had set in a few days before, and still continued. The appetite had entirely failed.

Diagnosis.—Professor McEachran, after pointing out the symptoms, gave it as his opinion that the cow was suffering from abscess of the pericardium, arising from a foreign body, such as might get into her food from the kitchen; and mentioned a skewer, needle, or hairpin.

Prognosis.—She was not expected to live over a week or ten days; no treatment was recommended. Next day a number of the students were taken to see the case, and arrangements were made for a *post-mortem* examination when she died. This took place about fifteen days afterwards.

Post-mortem Examination.—The whole sub-thorax was œdematous, and the muscular tissue wasted and pale. The cavity of the chest was quite three-ourths full of a reddish-brown fluid. The lungs were small, and compressed, against the roof of the cavity. The pericardium was very much thickeneds and attached to the apex on the left side, while the remainder of the sac was filled almost to bursting with mixed pus and serum containing caseous flakes. The muscular substance of the heart was pale, and the valves and internal structures free from organic disease. On the left side, near the middle, half of a common hairpin was found imbedded in the thickened pericardium, and projecting into the sac. The pericardium was more than half an inch thick, and lined by a dense pyogenic membrane.

The specimen has been preserved and placed in the museum. This is the second case of a similar kind met with by the Professor; the other one occurred in 1866, in Western Canada, when a skewer five inches long was found imbedded in the right side of the heart. This case was also diagnosed during life.

M. C. BAKER, *Secretary and Treasurer.*

ROYAL AGRICULTURAL SOCIETY.

AT the monthly meeting, held on Dec. 6th, 1876, the Hon. W. EGERTON, M.P. (Chairman), reported that, with reference to the case of Mr. Waldron's flock, the chief constable of Berkshire had written that the flock had been inspected by a competent inspector, and that no action had been taken until after a certificate of the flock being affected with Foot-and-mouth disease had been given by a veterinary surgeon. Mr. Duguid, in reply, had written to the secretary as follows :—

"I forwarded to you a statement of the case as represented to me by Mr. Waldron, who distinctly told me his flock had been condemned for having Foot-and-moutth disease on the authority of a policeman, and never mentioned the fact that they had been examined and condemned by an experienced veterinarysurgeon six weeks previous to my visit."

Mr. HARPLEY had reported that there are nine qualified men eligible to compete for the scholarships, having passed with great credit or with very great credit in the present year, and that the examinations will be held early in January. The examiners (3) will be appointed by the Council of the Royal College of Veterinary Surgeons on Dec. 8th.

Dr. BURDON SANDERSON had reported that the experiments on Foot-and-mouth disease were commenced in June, and have been continued in successive series up to the present time. The modes of infection employed have been of the most various kinds, but the results as yet have been negative. The investigations of Pleuro-pneumonia have been continued simultaneously, with reference, first to the modes by which the disease is supposed to be communicable, and secondly to its pathological results. With regard to the further prosecution of the inquiry, Dr. Sanderson explained that it was intended,—

1. To make experiments with a view to the testing of the value of several modes of infection not yet tried—*e.g.*, the inhalation of fresh dried material into the lungs, the exposure of animals to the emanations from hides, flesh excreta, and other matters supposed to be infective.

2. To bring any animals, found by previous experiments not to be susceptible of infection by immediate contact, into relation with diseased animals, by placing them in the same stable with animals of the same class.

3. To slaughter other animals for the purpose of ascertaining whether or not, in the absence of any appreciable signs of infection, the lungs or other internal organs exhibited any latent changes corresponding to undeveloped stages of the disease.

It was stated that the sum of £339 8*s.* 8*d.* had already been expended in the purchase of animals, and in the current expenses of the inquiry, and that a further outlay of £93 would be required in order to proceed with it on the same scale to the end of the year. It was recommended that a further sum of £150 should be expended on the remuneration of the skilled persons engaged in the investigations,—viz., £100 to Mr. Duguid for his services, and £50 to Professor Yeo, who had undertaken the pathological part of the work at the Brown Institution. The total expenditure during the year ending Lady Day, 1877, would therefore be £580. The report concluded by proposing that in case it should be thought expedient to continue the investigations with the same animals, the grant for the ensuing year should be £250, it being understood that this sum should cover all ordinary expenses up to Lady Day, 1878.

This report was adopted.

The CHAIRMAN of the Committee then gave notice that at the next Monthly Council he would move for a grant, not exceeding £250, to be placed at the disposal of the Committee for the year 1877, for general purposes, and for special scientific inquiries into Pleuro-pneumonia and Foot-and-mouth disease, now being carried out by Dr. Burdon Sanderson.

Army Veterinary Department.

Gazette, November 28th, 1876.

ROYAL ENGINEERS.—Veterinary-Surg. of the First Class D. I. Hinge, from the Royal Artillery, to be Veterinary-Surg., vice Veterinary-Surg. of the First Class W. Varley, promoted to Staff Veterinary-Surg.

VETERINARY DEPARTMENT.—Veterinary-Surg. on Probation W. A. Crow to be Veterinary-Surg., vice C. Clayton, transferred to the Royal Artillery.

Gazette, December 8th, 1876.

VETERINARY DEPARTMENT.—F. Smith, gent., to be Veterinary-Surg. on Probation.

Veterinary-Surg. R. F. Frost has been appointed to the post of Veterinary Instructor, British Burmah. It is believed that Mr. Frost's duties will chiefly consist in investigating cattle disease in Burmah.

Inspecting Veterinary-Surg. J. H. B. Hallen, Director of Army Remount operations, has returned to Saharanpore.

The following movements of Veterinary Surgeons of "A" Brigade, R.H.A., under orders for England, are ordered: viz., Veterinary-Surg. J. Reilly, from Morar to Lucknow; Veterinary-Surg. J. C. Dwyer, from Morar to Umballa, thence to Meean Meer.

Veterinary-Surg. J. Mathews, Veterinary Department, is directed to proceed from Benares to Rawal Pindi, and take over charge of the 4th Hussars from Veterinary-Surg. Elphick, R.A.

Jurisprudence.

SHAFTESBURY COUNTY COURT.

The Liability of Owners of Entire Horses.

William Meatyard, farmer, of Manston, sued John Coates, gentleman, of Hammoon, Blandford, for £40, damages sustained through the negligence of defendant's servant. Mr. Robins, of Shaftesbury, for the plaintiff; Mr. Dashwood, of Sturminster Newton, for the defence. Owing to its peculiar character, this case was heard in private.

Its importance to stockbreeders and agriculturists, together with its novelty, must be our justification for giving an outline of the facts. The defendant, who is a large breeder of stock, had an entire horse, which travelled for the season. On the 11th May last, defendant's man (Douchwood) called with the horse at plaintiff's premises, and a mare was put to it. During the service plaintiff asked the groom if there was not something wrong; but he replied that it was all right. The horse was used twice, at the request of the groom, who wished to use it a third time, as he thought the service was not complete; but the plaintiff refused, and the mare was removed to the stable. She became very ill, and died in about fourteen hours. Mr. Frederick Reeks, M.R.C.V.S., deposed to making a *post-mortem* examination, by which he found that the death of the mare was caused by rupture of the rectum. His evidence went to show that the mare had been served in an unnatural manner; and the plaintiff's advocate contended that this was the result of negligence on the part of the groom, who did not assist the horse at the proper time. Plaintiff said he gave £40 for the mare about two years ago. Mr. Dashwood said his client defended the action on principle. The horse was let at a low fee, as his client was desirous of improving the breed of agricultural horses. Douchwood was a most careful servant, who had been accustomed to the management of stock for years, and had attended Mr. Coates' animals at nearly all the exhibitions; the horse was quiet, and under proper control; and as the accident arose from no fault of defendant or his servant, but from circumstances over which defendant had no control, he was not liable for damages. Defendant gave evidence as to the quiet disposition of the horse and the efficiency of the groom. Douchwood was called, and admitted that he was not at hand at the proper moment, but said he was unaware that the service was being improperly performed, or he should have stopped it. His Honour was of opinion that the duties of the groom had been neglected, and that therefore the defendant was liable. Judgment for the amount claimed. Mr. Dashwood would be granted a case if he thought it necessary to appeal.

Obituary.

In our last issue we announced the untimely death of our esteemed colleague, Staff Veterinary Surgeon W. Varley, at Aldershot, on the 21st (not the 20th) November. His funeral took place on the 24th of that month; and a military contemporary alludes to it as a proof of the high estimation in which he was held at the Camp:—"The firing party was furnished by the Royal Engineer companies; then came the band of the 64th Regiment, playing the 'Dead March in Saul'; the corpse came next,—and on the coffin, which was of polished oak, were the hat and sword of the deceased officer, and several wreaths of flowers. The deceased officer's charger followed immediately after the corpse, after which came two coaches containing the chief mourners. Nearly the whole of the Engineer troops—of which, prior to his promotion, Mr. Varley was for many years veterinary surgeon—together with the Royal Engineer companies and the military police, followed, and the rear was brought up by a number of officers, including Lieut.-Gen. Sir Thomas Steele, K.C.B.; Col. Wood, V.C., C.B., A.Q.M.G.; Col. Harman, A.A.G.; and Capt. Cardew. On arrival at the church, the body was met by the Principal Chaplain and the chaplains of the division; and the procession along the aisle was headed by the surpliced choir of the church, in which the deceased had taken a warm interest. The service in the church was performed by the Rev. W. Bullock; and on its conclusion the procession re-formed, and, amid heavy rain, which had commenced to fall, continued its march to the cemetery, where the remaining portion of the burial ritual was read, the usual three volleys being fired over the grave. The deceased, who was forty-five years of age, was highly respected." His Royal Highness the Duke of Connaught, through Col. Sir Howard Elphinstone, K.C.B., commanding the Royal Engineer Train, was graciously pleased to convey his condolences, with his portrait, to Mrs. Varley. This token of His Royal Highness's generous regard for one of their number, will be greatly appreciated by the officers of the Army Veterinary Department, who have every reason to be grateful to their soldier Prince.

Mr. W. Cockburn, jun., of Glasgow, who graduated in 1866, died, we much regret to announce, on November 23. The veterinary profession sustains a heavy loss in the demise of Mr. Cockburn, whose past career gave promise of a bright future. In his own immediate locality he was greatly beloved and respected, and his death has been the subject of public comment. One influential journal thus alludes to the mournful event: "By a large number of agriculturists in the west of Scotland, and owners of horses and other stock in Glasgow, the intelligence of the unexpected death of Mr. Cockburn, jun., veterinary surgeon, who succumbed to gastric fever on the morning of November the 23rd, after three weeks' illness, was received with much sorrow. The deceased gentleman, who was well skilled in his profession, and a ready and indefatigable worker, for the last eight or nine years assisted his respected father in attending to an exceedingly large practice, and during that time won the confidence of a large number of customers, as well as troops of friends, from his own social good qualities. He was a finished horseman, and often led the field with the Lanarkshire and Renfrewshire foxhounds; while his neat seat in the saddle, and able handling of his horse, often excited the admiration of onlookers at the ring side of many west country cattle shows, where he secured frequent honours (notably at the Glasgow Agricultural Society's exhibition) in the jumping competitions. He was also a well-known member of the Queen's Own Yeomanry Cavalry, to which regiment he was not long ago gazetted veterinary surgeon; and at the annual parades at Hamilton he will be missed by many, as he indeed will be by 'man

and beast' in Glasgow and the agricultural districts around. His death is the more melancholy, seeing that he was scarcely a year married. Much sympathy is felt for his young widow in her untimely bereavement."

In our issue for November last we alluded to Mr. Paton, 4th Hussars, as being about to be invalided from India on account of ill-health. We are now greatly pained to learn that, during his passage to England, his death took place under the most melancholy and afflicting circumstances. We greatly deplore the loss of Mr. Paton. Personally, he was one of our dearest and most attached friends, from college days onwards. Professionally, he was one of the early and frequent contributors to the *Veterinary Journal*, in the success of which he took the warmest interest—deeply impressed as he was that modern veterinary science and professional progress should be adequately represented by an independent organ. He was an able veterinarian, and his contributions to our scanty literature are somewhat numerous; they are largely marked by originality and close observation. Mr. Paton served in the Crimea in 1855-6; after which, joining the Cape Mounted Rifles, he was stationed for many years in South Africa. On the disbandment of that regiment, he was transferred to the Army Service Corps, from which he exchanged to the 4th Hussars this year. Sincerely esteemed by all who knew him, for his many excellent qualities, our deceased friend had a great claim on their regard and admiration, from the readiness with which he was willing to sacrifice himself for the benefit of others. This won for him, some years ago, the medal of the Royal Humane Society—he having saved a person from drowning; and not long ago a bar was added to the medal, for rescuing, at great peril, a man who was perishing in the river Liffey, in the presence of a crowd of people. We can badly afford to lose Mr. Paton from the ranks of the profession, but most of all from the Army, of which he was one of the most esteemed and painstaking officers.

We have received intelligence of the death, in India, of Mr. J. Hume, Army Veterinary Department, who graduated in 1873. This event will give rise to much regret, as Mr. Hume was much liked by all who were brought into contact with him.

The following deaths have also been reported: Mr. W. Francis Hedley, M.R.C.V.S., of Richmond, Yorkshire, who graduated in 1838; Mr. Lewis Fielder, M R.C.V.S., of Dunsfold, who graduated in 1830; Mr. J. Hazell, M.R.C.V.S., of Great Bromley, Essex, who graduated in 1845; J. Barton, M.R.C.V.S., Birkenhead, a graduate of 1844; J. B. Bretherton, M.R.C.V.S., Liverpool, who graduated in 1820; G. Bretherton, M.R.C.V.S., Liverpool, a graduate of 1853; C. Speakman, M.R.C.V.S., Liverpool, a graduate of 1822; G. Stewart, M.R.C.V.S., Rothiemay, Banffshire, a graduate of 1846; J. Simpson, M.R.C.V.S., America, a graduate of 1864; J. Martin Fagan, M.R.C.V.S., Ormskirk, a graduate of 1868; and J. S. Forbes McDonald, M.R.C.V.S., Turriff, Aberdeenshire, who graduated in 1868.

Notes and News.

XANTHIUM SPINOSUM AND RABIES.—At a recent meeting of the Paris Société de Pharmacie, M. Yvon described some experiments that had been made in the Alfort Veterinary School, by Professors Trasbot and Nocard, respecting the alleged prophylactic action of *Xanthium spinosum* against Rabies Canina. The results had been entirely negative.

FARCY AND GLANDERS IN INDIA.—We learn that a severe outbreak of Farcy and Glanders has occurred among the horses of the 11th Hussars at Umballa. As usual in such outbreaks, the grass-cutters' "tats" (ponies) introduced the malady; five of these animals had to be shot, as well as five troop horses. The regiment was afterwards carefully inspected, and three cases of Glanders were discovered. It would appear that the course of this serious malady is very insidious in India, and rarely presents acute symptoms.

DISEASE AMONG CATTLE IN INDIA.—A deadly type of "Murrain" (why employ this unmeaning word of the Dark Ages?) has broken out among the cattle in the Kangra district of the Punjab, compelling the local authorities to apply for the services of a veterinary surgeon. The *Indian Public Opinion*, a Lahore paper, in a recent issue, draws the attention of the Government to the prevalence of cattle disease in the Punjab. It is stated that Epizöoties among cattle are much on the increase, and that Commissioners take no steps to put a stop to the spread of these diseases. Some time ago Mr. Boyd, Army veterinary surgeon, submitted a very full report on the diseases of cattle in the Punjab; and the remedies suggested would doubtless have succeeded in arresting the ravages then committed. Unfortunately the suggestions of Mr. Boyd do not seem to meet the views of the ignorant and apathetic zemindar, and the result is that many districts are now the centres of disease. It is said that the remedies recommended by Mr. Boyd are complicated, and cannot be carried out satisfactorily. But it is time that some steps should be taken by the authorities to protect the province from such a calamity. We are informed that disease among cattle prevails in parts of Bengal.

HORSES IN GERMANY.—According to the *Militar Zeitung*, the German army possesses at the present time 63,304 horses, 6403 being classed as "young horses." Of the total number, 48,962 belong to the cavalry, 12,03[illegible] to the artillery, and 2036 to the train of the army.

VETERINARY EDITORSHIP. — Mr. George W. Rust, founder of the American *Live Stock Journal*, is obliged to retire from the editorship, owing to ill-health. He is replaced by Mr. James Law, Professor of Veterinary Science at the Cornell University, Ithaca.

SINGULAR EPIZÖOTY AMONG FISH.—A Maryland newspaper reports "A singular freak of nature has taken place on the Atlantic coast during the past week. Millions upon millions of dead fish of different kinds have been washed up from the sea, and lie rotting in the sun, like John Randolph's mackerel on a moonlight night. In one place on Cobb's Island there is a strip of the beach two miles long and seventy-five feet wide covered with them to a depth of from three to six feet. Several large vessels are engaged in collecting and transporting them to the farmers of Accomac County, to be used for manure."

HYDROPHOBIA COMMUNICATED BY NON-RABID DOGS AND CATS.—Dr. Moritz related to the St. Petersburg Medical Society the case of a boy who died with well-marked symptoms of Hydrophobia six weeks after being bitten by a dog—the dog up to the time of the boy's death never having exhibited any sign of Rabies. A similar case was communicated to him by a colleague of a boy who died hydrophobic after being bitten by a cat—the cat remaining to all appearances well. Dr. Severin had also met with a case of a child dying who had been bitten by a dog that continued well. He had inoculated rabbits with saliva, blood and pus taken from this child, but without producing any results.—*St. Petersburg Medical Wochenschrift.*

HABITS OF ANIMALS TRANSMITTED TO OFFSPRING. — Mr. Potts, of Phinitahi, New Zealand, writes to *Nature* of October 19th, 1876 :—"Breeding many horses yearly on my station, I notice, as a matter of course, some of their peculiar habits. In a semi-wild state on a run, horses graze together in large or small companies, which 'station hands' call 'mobs'; these mobs wander at will over a large area of country, finding abundance of good natural pasture and water. Some years since, a mare became solitary in her habits, always seeking one particular creek; whenever released from work she made off to her favourite feeding-ground by herself; if 'rounded up into a mob' she would take the earliest chance that presented itself of reaching her usual haunt. One of her progeny, some years after, showed a similar liking for solitude; he was placed among several other horses (many of which he had known for years), on a small run intersected with bushy gullies, more or less rocky. He was soon missing, and search was made for him for some time without success; he was supposed to have come to grief in the bush. At length he was found, most unexpectedly, on a small patch of pasture between two rocky gullies thickly bushed; this spot was so difficult of access that a slight track had to be cut to get the horse back. Having been brought from a large station where he was bred and reared, he no longer enjoyed a great range by which he could place any long distance between his companions and himself; he displayed much tact and judgment in the way he secured the indulgence of hereditary habit, by discovering and reaching with difficulty an almost inaccessible solitude. One of the best and fleetest stock mares for the fast and hard work of 'cutting out' was a beautiful creature notorious as an incorrigible kicker. She has most faithfully transmitted this vice to her offspring. 'Cutting out' is drafting a beast out of a mob, following it through all its wild rushes, twistings, and turnings, through perhaps many hundreds of cattle, never leaving it till it is fairly drafted out. This work often taxes the skill and energy of the stockman and his horse pretty severely. Peculiarity in the formation of the hoof has been handed down to descent after descent by a grand old mare, who had this blemish as a slight counterpoise, perhaps, to her many virtues. A particular strain of Dorking fowls, which I have had for thirty years or so, always shows a restless desire for rambling—and that too under the difficulty of meeting with much persecution when straying beyond their ample range. This special family always exhibits what may be termed the gift of locality."

THE EFFECTS OF BREEDING AND FEEDING UPON THE SKIN.—The *American Agriculturist* remarks that an experienced tanner makes a curious reference to the effect of the high breeding to which Shorthorn stock has been subjected for some years upon the quality of the hide, and also to the effects upon the condition of the skin of high feeding, starvation, and climate. Thus hides grown in a cold climate, such as Canada or Russia, are thick and coarse in texture and fibre, and those from warm countries are fine and thin. The hides of "improved" cattle are thin and less valuable than those of the semi-wild cattle of South America and Texas; and in this respect the improved breeding which these cattle are undergoing tends to overcome the influence of climate, and is changing the character of their hides. Poor feeding and ill-health, as might be expected, cause the hide to be fine and close in texture, shrinking the fibre; this result follows the condition known amongst farmers as "hide-bound." It is not held as a serious consideration amongst farmers how much the hides of their cattle may be worth; but yet, as the value of the skins as a material for the manufacture of so widely used an article as leather is of no little consequence to the world at large, it is interesting to note that the better the cattle are fed and cared for, the better is the leather manufactured from their hides.

HORSE-TAMING IN MEXICO.—The taming of vicious horses by a Mexican officer is thus described in an American paper : "He took a cord, about the size of a common bed cord, put it into the mouth of the horse like a bit, and tied it tightly on the animal's head, passing his left ear under the string, not painfully tight, but tight enough to keep the ear down and the cord in its place. This done, he patted the horse gently on the side of the head, and commanded him to follow ; and instantly the horse obeyed, perfectly subdued, and as gentle and obedient as a well-trained dog, suffering his legs to be lifted with impunity, acting in all respects like an old stager. That simple string thus tied made him at once docile and obedient as any one could desire. The gentleman who thus furnished this exceedingly simple means of subduing a very dangerous propensity, intimated that it is practised in Mexico and South America in the management of wild horses. Be this as it may, he deserves the thanks of all owners of such horses, and especially the thanks of those whose business it may be to shoe or groom the animal."

MAIZE AS FOOD FOR HORSES.—A letter from New York, signed "A. B. Allen," has been published in the *Agricultural Gazette*, which gives some valuable hints as to the use of maize for feeding horses. Maize is of a very fattening, heating nature ; and therefore care must be exercised when it is first used, or when it is given in hot weather. To horses under four years old, he says, the proportion of maize should not exceed one to four of corn ; for horses under eight, half maize and half corn is enough. Old horses, even, should not be entirely fed on maize. A horse may have from two to twelve quarts per day given to it, according to its age and work done, etc. It is best given in a partially ground state, and if given whole is liable to cause colic. If ground up too fine, it is not easily digested. Horses in America are often turned into fields when the maize is in a green state, but if unaccustomed to such food, it would be likely to cause colic so severe as to greatly injure or even to kill them.

Correspondence, etc.

IMPORTANT NOTICE.

To the Editor of the VETERINARY JOURNAL.

SIR,—Will you kindly permit me, through the medium of your valuable journal, to draw the attention of the profession to the importance of forwarding at once any change of residence, etc., not only for the New Register, but in order that the voting papers may be issued in accordance with the provisions of the Supplementary Charter, for the election of Members of Council, and the respective votes of the profession duly recorded at THE ANNUAL GENERAL MEETING.

I am, Sir, your obedient servant,

WM. HY. COATES, *Secretary and Registrar.*

Royal College of Veterinary Surgeons,
Red Lion Square, London, W.C.,
November 23rd, 1876.

ETIOLOGY OF MILK FEVER.

To the Editor of the VETERINARY JOURNAL.

SIR,—With your kind permission I shall endeavour to reply to the communication of "Scrutator" upon this subject, which appeared in your issue of August last, as concisely and "pointedly" as possible. I wish to state here, that it was not the intention of my first communication to account for every phase of so-called Milk Fever in cows upon the hypothesis of retention, decomposition, and absorption of puerperal *débris;* but merely to state that it was my conviction that the typical case is so caused. Neither can I hope to unravel the intricate connection between uterine phlebitis and thrombosis, acute metritis, metro-peritonitis, puerperal toxæmia—*i.e.*, puerperal septikæmia and pyæmia—upon one or the other of which my conviction is that all of these cases can be explained, and that the *post-mortem* appearances will bear this explanation. That in cows the toxic element is in the ascendant is, I think, shown by the *post-mortem* appearances of the brain and blood—the one of which is often congested and always loaded with serum, the other being dark, *tarry*, and, however shortly after death it may be examined, exhaling a peculiar, faint, almost fetid, odour—which condition clearly shows the presence of a morbid poison.

I will here take space for the relation of two cases, which, contrasted, may help to throw some light on the subject.

Case 1.—This was a large cow of no particular breed, extra good milker, had always been healthy, and wants to come in with her sixth calf. On the fifth day before her time was up, she was turned into a yard adjoining her stall, seemed bright, and "played considerably." In the evening she became uneasy,—and, in fact, commenced her labour. From this time the appetite was fickle. On the morning of the second day after, the calf presented in the usual way, the labour having continued by fits and starts, but at no time had the pains seemed to be severe. In the absence of the owner, some neighbours thought it necessary to help her—which they did with unnecessary roughness. After some two or three hours of this the fœtus was still-born; the placenta was not delivered. Here the appetite failed entirely; she became continuously worse, until, when my attention was called—which was during the afternoon of the following day, or some thirty-two hours after the delivery—she was found stretched on her side, deeply comatose, breathing much embarrassed, pulse indistinguishable, heart's action weak and fluttering, great tympanitis, secretion of milk entirely suspended, bowels constipated. No treatment. At nine a.m. next day, the cow having been dead some twelve hours, a *post-mortem* examination was made. *Brain*—cavity of the arachnoid filled with bloody serum; substance loaded, and ventricles filled with serum; puncta vasculosa well marked; rupture and clot at pons Varolii. Blood dark coloured and fluid throughout; veins full. *Uterus*—Mucous membrane gangrenous; cotyledons softened, spongy, and bathed in pus; veins contain clots; sinuses, on pressure, yield pus; placenta adherent, very friable at its uterine attachments, but otherwise tough and apparently healthy. *Intestines* healthy, except where they had been in contact with the uterus.

Case 2.—This cow was a grade Ayrshire, a deep milker, and generally well nourished; was the property of a labouring man. She calved at about four p.m., April 18. About an hour afterwards she was noticed by the man's wife to be "a little odd." However, when the man came home, shortly after six the same evening, he *milked about eight quarts of milk from her;* and, although he noticed that she did not appear just right, nothing was done, and not much thought about it, until the next morning, when it was found that she could not get up and had no appetite. I did not see her until about half-past twelve o'clock on the 19th, when she was down flat, deeply coma-

tose, pulse almost imperceptible, *slightly* tympanitic ; she could not swallow ; the udder was flaccid. Owner said that when he found her down in the morning he had milked about two quarts of milk from her. No treatment. She died late the same night. *Post-mortem* examination, made about ten hours after death, revealed : *Brain*—much congested ; substance and ventricles contained an abnormal quantity of serum ; no rupture. *Blood* fluid and black. *Tissues* moist. *Veins* full. *Intestines* healthy. *Uterus* flushed and flabby—perhaps no more than it should be at this time. *Colyledons* slightly inflamed ; very small quantity of a purulent-looking fluid could be squeezed from the sinuses ; the smaller veins were noticed to contain clots. A portion containing a number of these veins was cut away, and the clot examined under the microscope, with such a result as induced me to send the whole specimen to a physician of large experience, with the statement that it was from the uterus of a cow, and a request that he examine it ; and if he found the veins to contain clots, to examine them microscopically. This he kindly did, and reported to me as follows :—

" Dr. Lyman. — Dear Sir,—The specimen taken from the uterus of a cow, evidently a cotyledon, contained in the veins numerous clots. Some of these clots, after carefully removing them from the veins, I examined with the microscope, and, with a + 240 power, found large numbers of cells resembling pus cells, full of granular matter, many fusiform cells, full of the same granular substance, round cells aggregated together and filled in their interior in the same manner as the others. Acetic acid dissolved this granular material in some of the cells, leaving a nucleolus ; others were not affected.

" Very truly,

"April 15th, 1876. "S. W. BOWLES, M.D."

Now the first of these cases was undoubtedly one of Puerperal Metritis : the second evidently one of Milk Fever, in which the symptoms were established very soon after calving. I ask if the actual cause of death was not the same in both instances. In the case of No. 2 it could not be suspension of milk ; for this cow gave milk—not a great quantity, to be sure, but some—almost up to the stage of insensibility ; and up to the time of death the only peculiarity of the udder was that it was flaccid and below normal temperature ; certainly in this case, as in all others I have seen, as far from being in a state of active congestion as possible. I think the explanation of the cause of death in this case is Puerperal Toxæmia. Professor Williams (" Medicine," p. 624), in speaking of Metritis, says, " It is a diffuse inflammation, primarily seated in the mucous membrane of the uterus—*some, however, extending to the uterine veins*—giving rise to the formation of clots or thrombi, and extending to the peritoneum and intestines ; that the inflammation is characterized by its tendency to spread rapidly over a large surface, and by the formation of a fluid exudation, which, examined microscopically, consists of the *débris* of disintegrated blood globules, pus and blood corpuscles, and an abundant quantity of granular material, etc. . . . This affection may be looked upon as being due to pyæmic or ichoræmic poisoning, due, amongst " other things, " to wounds inflicted upon the uterus. . . . It may also be induced by obesity, more particularly in the bitch. . . . It may occur within a few hours after parturition, or its appearance may be protracted to the third or fourth day. Symptoms : paddling of hind-feet. . . . Almost a total suppression of milk. . . . At last the eye becomes amaurotic, and complete unconsciousness sets in." Now let us for a few moments see how closely one of these diseases resembles the other in some points. Williams says that the inflammation is primarily seated in the mucous membrane of the uterus. Here, unfortunately, I must again quote from such authorities as Barker

and Leischmann, who say that Puerperal Metritis (idiopathic) commences in the *veins* of the uterus, extending from them to its mucous membrane, the peritoneum and intestines. The next point is in the microscopic appearance of the products of disintegration. Compare those of Case 2, as reported by Dr. Bowles, with those of the exudate described by Williams—with due allowance, of course, for difference in location. Next, this affection is "due to poisoning caused by wounds" inflicted. Now Leischmann, speaking of the time of parturition, says, "A certain amount of traumatism always exists at the placental seat of the uterine cavity, which only becomes dangerous from the influence of some special toxæmia." The cause of obesity is already established in "Milk Fever"; if it should be that one is a modification of the other, the present exception in favour of the bitch might well be overlooked. As to the periods of their appearance there is no appreciable difference. The first symptoms—viz., paddling of hind-feet, and notably *almost a total suppression of milk*—seem to call for direct comparison. Especially, why should a natural result of nervous prostration be passed over in the one case by a mere mention, and in the other be accused of being the *cause* of so much damage? The minor symptoms seem to tally pretty well; compare Prof. Williams's description of them with that of the two cases, and particularly the manner of death. Unfortunately, Williams does not give the *post-mortem* appearances of Metritis; but a comparison of those of the two cases does not show any vital difference. That congestion of the brain is not a persistent *post-mortem* appearance of Milk Fever is shown by Williams,—who, in describing the morbid anatomy of this affection, says, ". . . and in others no marked congestions have been seen, having in all probability disappeared *post mortem*, or perhaps immediately prior to the animal's death; . . . but in all cases the brain substance itself is loaded with serosity."

Now having stated, as clearly as possible in a limited space, my position in general in this matter, I will endeavour to answer the questions put to me by "Scrutator."

I. As to the title of my first communication, that is clearly a matter of opinion, and has no bearing on the point at issue.

II. As to my obliviousness, I think the remarks already made in this paper will clear me from this accusation.

Case 2 will answer the third question. Again, the value of quotations from Barker is a matter of opinion. How can one describe the *post-mortem* appearances of a disease, if there are none, in a given case? In this connection, I will say that I have recently seen what I consider to be a case of purulent infection of the joints following a case of "Milk Fever," which case will probably be reported to the journal at a future day.

V. The early stage of septic poisoning I consider to be one of inflammation; and I submit that in this stage the pulse would be full and strong, and that the giddiness, etc., described would be among the earliest manifestations of the action of the blood poison on the nerve-centres.

VI. It is so well known a fact that Gaspard, Virchow, and others, have used putrid pus in the experiments referred to, and that healthy pus in the blood causes no harm, that it would seem as if the special pointing out of the fact in a paper of this kind was superfluous. I never thought of being accused on this score.

VII. It is quite likely that the blood drawn in an "early stage"—viz., the inflammatory—would have the appearance ascribed to it by "Scrutator"; this proves nothing. Let him tell us what is the appearance of it after the disease has thoroughly established itself. I can attest that, *post mortem*, it coincides exactly with the description given by Dr. Copeland.

"Scrutator" is unfair, and overdoing the thing, when he compares the

blood which he draws in the "early stage" of "Milk Fever" with Bennett's description of the blood, *post mortem*, in a case of Septikæmia.

"Scrutator" says that the suspension of the secretion of milk is caused by "congestion and deficient nerve stimulus;" and a little further on, in the very next paragraph, that he believes the suspension of the secretion of milk causes the cerebral congestion. Will he kindly reconcile these two statements?

I will allow that if central congestion be the cause of the suspension, it (the suspension) "can be easily accounted for;" but if this is the case, then the theory of suspension of the secretion being the cause of the congestion is exploded; otherwise if it (the suspension) causes the congestion, and is so easily accounted for, will "Scrutator" do so,—keeping in mind always that he is talking about suspension of this secretion as a primary lesion, and congestion as merely a result of this, and that "Milk Fever" is quite capable of killing a cow within thirty-six hours of the time of parturition?

Regarding "Scrutator's" fourth cause for "Milk Fever," it seems to me that a much more natural explanation of his experience would be that the best cows—that is, the large milkers—are ordinarily selected for dairy purposes, and that the liability of such to this disease is undoubted.

And now, Mr. Editor, I consider it only due to myself to say that I look upon the peculiar way in which "Scrutator" has thus far conducted this correspondence as entirely uncalled for, and ungenerous in any case; and that the use of a fictitious signature to a paper of the description of his last, under the circumstances, is a proceeding which is scarcely fair, to say the least of it. I call upon him for his proper signature.

Yours respectfully,
CHARLES P. LYMAN.

Springfield, *September 30th*, 1876.

[The pathology of this disease, or diseases, has long been a source of discussion among veterinarians in this country, as well as on the Continent of Europe. In "Veterinary Obstetrics" we shall endeavour to throw all the light we can upon it.—ED. *V. J.*]

A SCHEME FOR RAISING THE STATUS OF THE VETERINARY PROFESSION.

To the Editor of the VETERINARY JOURNAL.

SIR,—I admire very much the ability and philanthropy of spirit displayed by you, for the protection of the veterinary profession and the public from the inroads of quacks and quackery. It is only in the means of attaining such a desirable object that I would be disposed to differ with you on the subject. Where do the quacks spring from, as a rule? From the farrier's shoeing-forge, and the veterinary students who have failed to pass the necessary examinations to qualify them as veterinary surgeons. There are amongst them, I have no doubt, some of the lowest class of society, and some of them may even have three or four wives; nevertheless, among them I have met men of great ability and good sound common sense,—men whom I would be proud to welcome as brethren.

Why do they exist? Why is there a demand for their services? Simply because there are in the profession men with M.R.C.V.S. to their names who could not perform the simplest surgical operation efficiently—far less write a sensible prescription for the medicine for their patients. How can such a state of matters be remedied? By lifting or raising the profession, and also the quack! I remember, some months ago, asking one of my elder brothers in the profession, "for whose opinion I have the greatest respect,"

what he thought of the action taken lately by the Highland and Agricultural Society? His answer was, "It is premature. If anything is to be done, it must be accomplished by the members of the profession themselves." Since then his saying has haunted me by night and by day till now, when it resolves itself into the following shape: viz., that we build and endow a Scotch veterinary university at Edinburgh, with authority to train or teach, to examine, and to grant degrees, such as "Veterinary Farrier," "Veterinary Surgeon," and "Veterinary Doctor of Medicine." The veterinary farrier should by law be compelled to attend the said university for a period of at least two sessions, and receive a course of lectures on the following subjects: viz., the structure and functions of the horse's feet and limbs, and a similar course on the art of shoeing. At the end of the period specified he should be examined, and, if found qualified, be allowed to practise as a "Veterinary Farrier." For the "Veterinary Surgeon" there should be a similar course to the one lately introduced, except that the degree should only qualify for attendance on the horse and dog. After passing the final examination, he should be two years practising as an assistant before receiving his diploma. The "Veterinary Doctor of Medicine" should attend at the said university for a period of not less than four years; the degree to qualify for attendance on all domestic animals. I believe that a scheme such as the above would attain the object that every one who has the welfare of the profession at heart desires to see accomplished.

How is such a scheme to be carried out? I answer, By the members of the profession. There are many sources to which we might look for help; but let the profession make a beginning; let them show to the world that they are in earnest. Then they may expect encouragement and help from those who are able and willing to assist, if the project were once properly set in motion.

Would you receive the opinions of the profession on such a scheme? If you find a hundred members who would subscribe £100 for such a purpose, I will also be happy to do so.

If you find a hundred members who would give £200 for such a purpose, I will gladly do likewise.

"Yours respectfully,
"A. J. MacCallum."

PROFESSIONAL MORALS.

To the Editor of the Veterinary Journal.

Sir,—I am induced to make a few remarks on the above-named subject, in the hope that it will tend to prevent a repetition of the unprofessional conduct which came under my notice a few weeks since. On August 30th I received a letter from a veterinary surgeon in Dorsetshire, asking me to go, by an early train on the following morning, a distance of over seventy miles, to give an opinion on a case of illness of a horse. I accordingly went, but did not see the veterinary surgeon, as he had not received my letter stating that I was coming. I saw the horse, and found that it was suffering from Acute Laminitis in all four feet. I was told by the owner's son that it was first seen by the veterinary surgeon on the 24th, and that he pronounced it to be a case of Fever in the feet, and that he had applied poultices to these; but in consequence of his father not thinking that the complaint was in the feet, and the veterinary surgeon not being as attentive as was considered necessary, he, on the 26th, telegraphed to another veterinary surgeon at a town ten miles distant, and whose assistant came the same day and examined the horse, especially about the loins, giving the opinion that it was a

case of Congestion of the Kidneys, and not Laminitis. No. 1 veterinary surgeon did not see the assistant, neither was he allowed to see the horse again. On the morning of the 29th the horse was seen by the assistant's principal, who then told the owner that there was some trifling ailment affecting the feet, but left it to be inferred that it was not the chief disease. However, the poultices were again applied, and continued until I arrived when they were taken off and the feet washed as clean as possible before I was allowed to see the horse. A glance was sufficient to enable me to diagnose the nature of the case, though I had the horse led into the yard. I have since been informed that he died on the 24th September, his hoofs then sloughing off.

We have undoubtedly made considerable progress in our profession in the last few years; still there is great room for further improvement, and I consider it is not just to ourselves to overlook, and by inference approve of, conduct incompatible with the social position it is sought to give the profession in public estimation, as such a course would act as the greatest barrier to the advancement of veterinary surgeons themselves. What is wanted, more than Acts of Parliament for putting down quacks, is a due appreciation among the members themselves of the individual responsibility attaching to each, not only to secure a fair share of pecuniary remuneration, but also for the advancement of the profession at large, which is best done by recognising a path of moral rectitude under all circumstances. This is as essential to social advancement as is any improvement in the preparatory studies, however much an enhanced course of education may tend to render the mind sensitive to the influences brought to bear upon it in after life. We ought to ask ourselves the question, Are we actuated by such motives and principles in all the relations of life as will entitle us to expect that social status to which members of an honourable profession may aspire? We shall remain what we make ourselves—just as we, as a body, have made ourselves what we are.

In the May number of the *Veterinary Journal*, Mr. Field has stated, in reference to consultations, "Surely if physicians and surgeons find that they and their patients are benefited by getting a second opinion, we, of all people, ought to."

But I am sorry to be obliged to state that there is still a great deal of jealousy about allowing another veterinary surgeon to be called in consultation when a case is under treatment; and no doubt there have been too many cases in which there has been cause for it, from the consulted veterinary surgeon either trying to get the case into his own hands, or from a desire to show superior knowledge of it, or not being sufficiently cautious in expressing his opinion. However, if consultations were more frequent, the abuse would correct itself. If veterinary surgeons would only do their duty to the profession, as well as to themselves, we should soon not require many special Acts of Parliament. At present there are only a few who give themselves the slightest trouble to benefit the profession. There are many who never see the *Veterinarian*, and who do not know of the existence of the *Veterinary Journal*. I went to a town in Wiltshire last month, in a consultation case; and on asking the veterinary surgeon if he subscribed to the *Veterinary Journal*, he said that he had never heard of it, and he had discontinued taking the *Veterinarian*, as there was nothing in it.

There are also many members conducting large practices, who subscribe to the veterinary journals, and have the ability of adding to our literature; but from a want of interest they do not do so—some of them making the excuse that they have not time: yet they can find time whenever they desire to attend races, or have a day's hunting, coursing, shooting, and many other pleasurable engagements. I have also heard other members state

that they do not feel competent to write for the journals. If they would only try to report their cases, they would soon find it a very easy matter.

I beg to remain, yours truly,

Bath, *November* 18, 1876. THOS. D. BROAD.

VETERINARY SURGEON *alias* "VET."

To the Editor of the VETERINARY JOURNAL.

SIR,—When Mr. F. C. Burnand, of "Happy Thought" renown, set "about buying a horse," it struck him that "Veterinary" was an awkward word, and that it could not be said well without shaking your head. The *alias* "vet." he styled a "jaunty abbreviation." With equal propriety he might have added "and an opprobrious one."

It is to be acknowledged that "Veterinary" *is* rather difficult of integral and distinct articulation, and that its construction unfortunately admits of numerous undignified conceptions and unbecoming contractions, needlessly indulged in by its possessors, and heedlessly employed by others and the public generally. So long as the former, by colloquial example, invite the latter to render their titulary adjective *vicariously*, so long must we neither object to be dubbed "vets.," nor "vits.," nor disown the several changes that are rung upon, or wrung out of, the word "veterinary." The profession, at least, ought to know better than to behave disrespectfully to its own title; it has no admissible excuse to be "jaunty," or less than serious with itself; yet, strange to say, it is wondrously so, even where it *certainly* ought not to be. *Out* of the army, and in the army, there are those who style themselves "vets.," and evidently regard the nickname in the light of a compliment. There is no accounting for taste, it is true; but we really cannot understand a member of the Royal College of Veterinary Surgeons calling himself a "vet." To be spoken of—and what is worse, introduced—as "the vet.," sounds odious and almost vituperative. Such is *our* taste; and we believe we have participators in what we have said, though our views to some may appear extreme.

There are adequate reasons why we should make the most of our profession, as well as of ourselves as veterinary surgeons; for few outside the professional pale will help us in this desirable direction. There are also serious objections to the adoption of "jaunty abbreviations," either in respect to our title or nomenclature; and the sooner we eschew this undesirable tendency the better. "What's in a name?" There must be something—good, bad, or indifferent. By that which we know and call ourselves, rest assured we shall be known and called by the world; and though "a rose by any other name would smell as sweet," we question—and indeed we need not—whether "veterinary surgeon" by any pseudonym would sound as mellifluous. Therefore, having the selection of its orthoepic cadence, it will be as well to study the accentuation and integrity of the term "veterinary," with a view to a correct and euphonious pronunciation; so that an exemplary rendering by those whom it most concerns may tend to establish its universal adoption, and to discard its monosyllabic and other nicknames. We cannot call to mind another word so liable to unwarrantable distortion, curtailment, and cacophony; and as few manage to spell it correctly, and fewer succeed in pronouncing it aright, we earnestly invoke the aid of "Spelling Bee" directors. Can anything be more disagreeable than the malpronunciation of names or other important words? No, unless it is the conversion of "vet." into a verb—an insult no less to the English language than to the British veterinary surgeons.

"I wish him *vetted* by you,"—"He was *vetted* by *Vet.* H.,"—and "I will get you to *vet.* him," are the neological expressions rapidly creeping into use.

In some countries veterinary surgeons are, by courtesy, addressed as "Doctors;" and, so far as courtesy goes, they have as much right to the "Chalk Degree" as many of the sister profession who meet with the same uncertified compliment. However, we want no more than that to which we are justly entitled, and no less than our dues—titulary or monetary: at present there is a dearth of both; but, perhaps, with the creation of the former, will come an increase of the latter.

Verily this "jaunty abbreviation," vet., sets one's teeth on edge, so harsh is its sound: it is derogatory to the profession, disparaging to its members, and should be abominable to every one. Let us hope, then, to hear less of "vets."—at any rate from Graduates of the Royal College of Veterinary Surgeons.

Faithfully yours,

RICHARD POYSER, V.S.,
6th Dragoon Guards (The Carabineers).

[We earnestly commend our esteemed correspondent's remarks and counsel to our veterinary readers. Nothing can be more undignified, vulgar, or slangy than the application of the designation he so energetically condemns, to a veterinary surgeon. Perhaps at first introduced by the hard-driven witling of a "comic" weekly paper, or by some untutored groom or stable-boy, whose unfamiliarity with pronunciation made him cut the word to suit his tongue; it is becoming only too common, even among those who don't pretend to small wit, and who would certainly object to make regular use of the stableman's lexicon. The suppression of the unmeaning and objectionable appellation rests to a large extent, if not altogether, with veterinary surgeons, who need not accept or acknowledge it, unless they approve of it.—ED. *V. J.*]

TO CORRESPONDENTS.

THE numerous communications, reports, and letters, unavoidably pressed out of this month's Journal, shall appear in our next.

Communications, Letters, Books, etc., Received.

COMMUNICATIONS have been received from W. Shipley, Yarmouth; H. Olver, Tamworth; R. S. Reynolds, Liverpool; S. Knott, Royal Artillery; J. Moore, Jun., London; Alex. Lawson, Manchester; W. Broughton, Leeds; A. G. Rolls, Arundel; T. D. Broad, Bath; M. C. Baker, Montreal; R. F. Frost, Royal Artillery, Mooltan; G. Wyer, Donnington; "Nemo;" A. J. MacCallum, Edinburgh; R. West, Redhill; J. Gerrard, Market Deeping; R. Robertson, Kelso.

BOOKS: *J. H. Steel*, Outlines of Equine Anatomy; *M. Foster*, A Course of Elementary Practical Physiology.

JOURNALS: *Oesterr. Vierteljahresschrift f. Wissenschaftliche Veterinärkunde; Edinburgh Medical Journal; Practitioner; Wochenschrift f. Thierheilkunde und Viehzucht; Der Thierarzt; Recueil de Médecine Vétérinaire; Annales de Médecine Vétérinaire de Bruxelles; Archives Vétérinaires; Revue Vétérinaire.*

NEWSPAPERS: *Norfolk Chronicle; Australasian Sketcher; North British Agriculturist; Illustrated Australian News; Melbourne Argus; Melbourne Leader; Scotsman; Medical Press; Broad Arrow; Australasian; Turf, Field and Farm; Live Stock Journal.*

All Communications, Books for Review, Advertisements, etc., must be addressed to the Publisher, 20, King William Street, Strand, W.C.

Morbid Specimens are to be forwarded addressed to the Editor, "Veterinary Journal," Brown Institution, Wandsworth Road, London.

Communications must be accompanied by the name of the writer, whether he may desire to have it published or not. Anonymous letters and articles cannot be inserted. The Editor does not hold himself identified with the views or opinions expressed by Contributors. Communications for insertion in the next number must arrive on or before the 15th of the present month.